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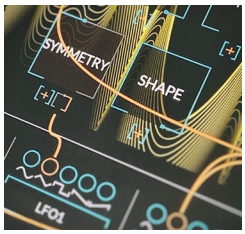

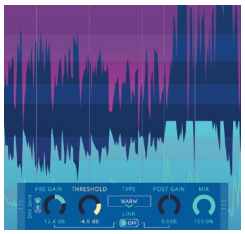

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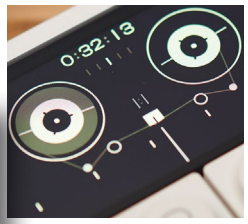
Korg Drumlogue



50 WAYS TO KICKSTART YOUR NEXT TRACK

IN-DEPTH REVIEW

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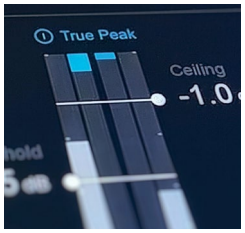

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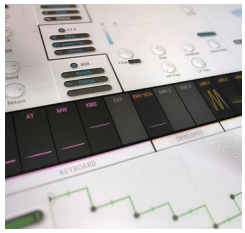
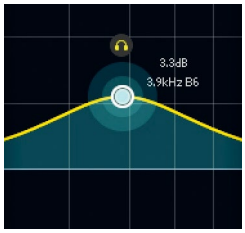
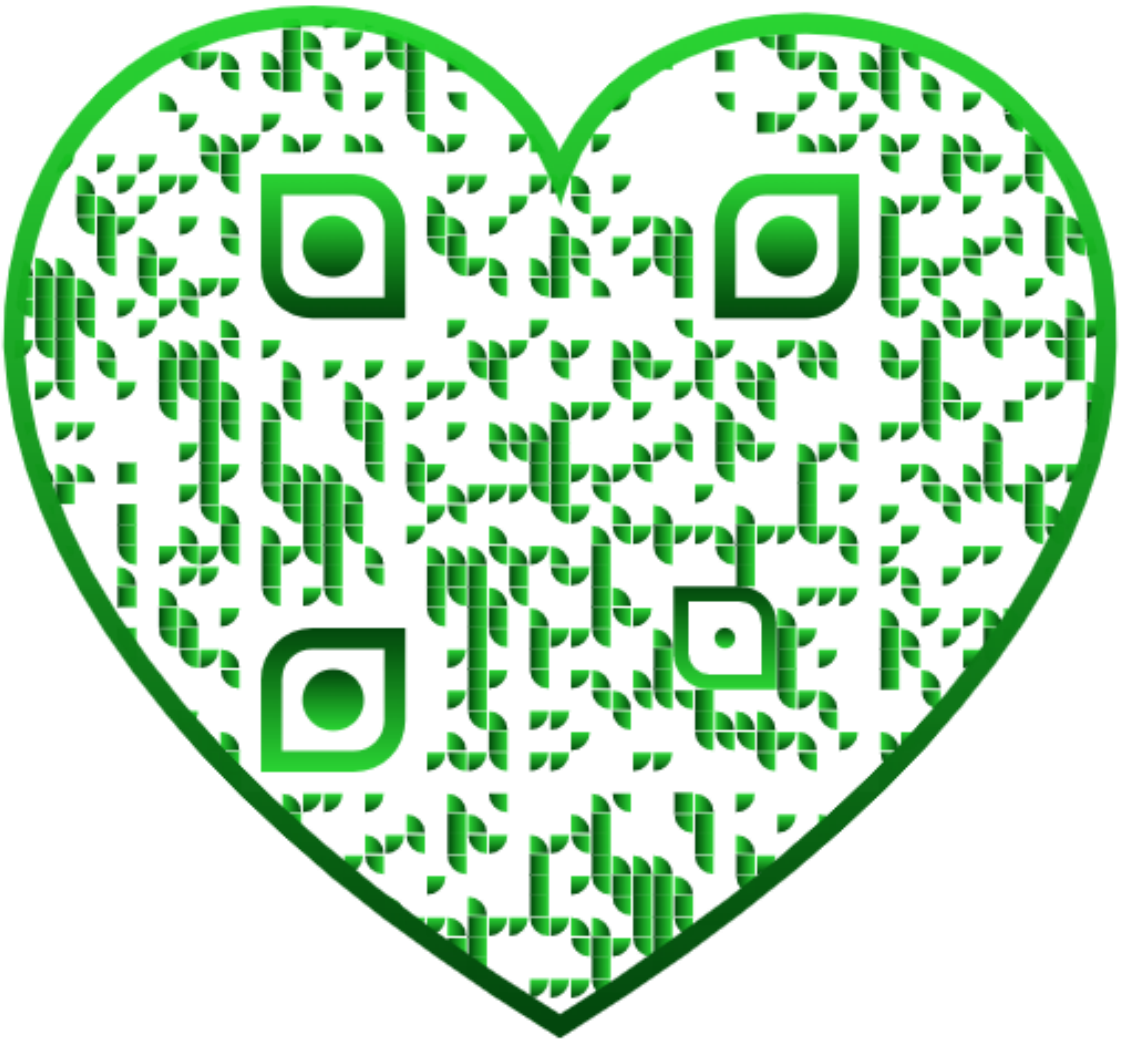
Maelstrom & Louisahhh

- KATE NV
- GOLD PANDA
- DORIAN CONCEPT



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PRODUCTION & DISTRIBUTION
Production Controller: Fran Twentyman **Production Manager:** Mark Constance
Printed in the UK by: William Gibbons & Sons Ltd on behalf of Future
Distributed in the UK by: Marketforce (UK), 2nd Floor, 5 Churchill Place, Canary Wharf, London, E14 5HU **Tel:** +44 (0) 203 787 9001

CIRCULATION
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Future Music, ISSN 0967-0378, is published monthly with an extra issue in December by Future Publishing, Quay House, The Ambury, Bath, BA1 1UA, UK
The US annual subscription price is $197.60. Airfreight and mailing in the USA by agent named World Container Inc, c/o BBT, 150-15 183rd St, Jamaica, NY 11413, USA. Application to Mail at Periodicals Postage Prices is Pending at Brooklyn NY 11256.
US POSTMASTER: Send address changes to *Future Music*, World Container Inc, c/o BBT, 150-15 183rd St, Jamaica, NY 11413, USA
Subscription records are maintained at Future Publishing, c/o Air Business Subscriptions, Rockwood House, Perrymount Road, Haywards Heath, West Sussex, RH16 3DH, UK

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New year, new ideas

Here at FM, we're not going to start laying any 'new year, new you' guilt on you. Don't want to join a gym? Fine. Not into giving up booze? Stay on the Christmas sherry for another month. Do what you've got to do.

What we will do, however, is encourage you to take that new year energy and funnel it into your music making. The cold winter months are the perfect time to shut yourself in the studio and try out a few new ideas – and we've plenty of them for you to check out in this first issue of 2023.

Head to page 26 now and get stuck into our bumper crop of artist tips, creative challenges, compositional guides and more. Make 2023 the year you make your best music ever.

We hope you enjoy the issue!

Si Truss, Editor-In-Chief
simon.truss@futurenet.com

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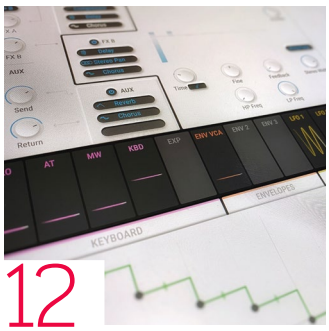

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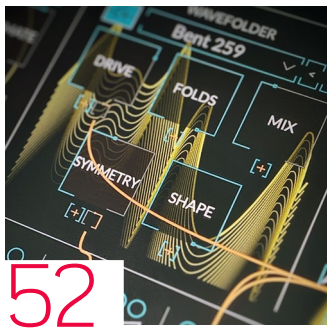

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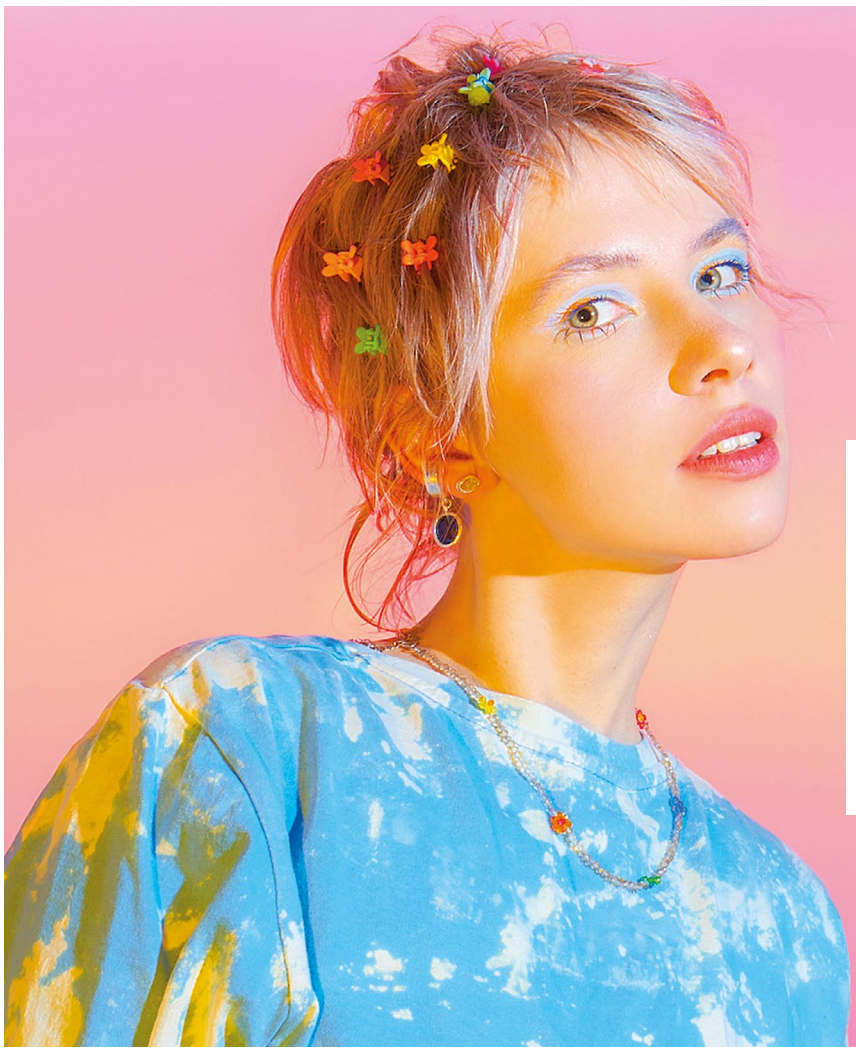

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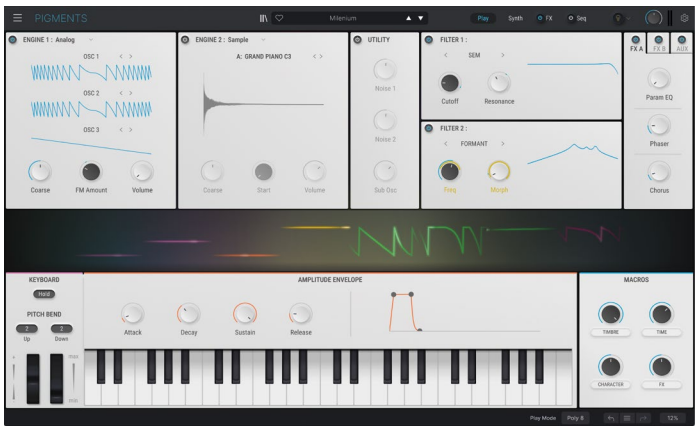
5 highlights of Arturia Pigments 4

Arturia's multi-mode softsynth gets a UI overhaul and a raft of new features

We've been vocal fans of Arturia's multifaceted power synth Pigments since its launch, and regular free updates Arturia have only made things better. The latest is a full update to version 4, which brings a new look to the plugin as well as a raft of new features. With an instrument as massive as Pigments, it's not always obvious what new things you can do, so let's dive into the five elements most deserving of your attention.



The new interface

Version 4 gives Pigments a UI overhaul. Most obvious is the new Light theme, which swaps the traditional darker skin for a brighter white one (almost confusingly similar to NI's Massive X, or is that just us?).

The most interesting UI addition is the Play mode, which adds a new, simplified view that hides a lot of Pigments' advanced parameters, effectively putting the core 'tweakable' elements of the synth up front; the sorts of things you're likely to use during a performance, including filter cutoffs, wavetable positions and effects depth. As a result, it's now the best point of access for patches once you're ready to perform. Hence the name.

MS-20 filter

Arturia's MS-20 filter emulation has been seen already in other releases, but it's a great addition to Pigments. The MS-20 was known for its aggressive filters that can be pushed into squealing self-oscillation, great for creating synth FX. Crank up the resonance and modulate cutoff for gritty synth sweeps and tension-building transitions.

Super Unison

It wasn't exactly hard to coax massive sounds out of Pigments in previous versions, but the pair of new effect modules added for version 4 make it even easier. The first of these is Super Unison, which lets users create up to eight duplicated voices at the effects stage and detune, spread and filter these. Particularly given a touch of modulation, it can turn even the most simple sounds into something rich and complex.

Shimmer Reverb

The second new effect is a shimmer reverb, which works by pitch shifting reverb reflections to create 'glistening', otherworldly spatial effects. It's fantastic for adding a bit of digital weirdness to atmospheric patches, chords and lead lines.

Better LFOs

Pigments 4 simplifies the LFO section, primarily by adding a selection of preset waveform shapes. It's hardly a revolutionary feature, but combined with the simple array of shaping controls, it makes it very quick and easy to rustle up whatever shape of modulation is required for the task at hand.

What else?

There's a lot more that's fresh for Pigments 4. Improvements have also been made to Pigments' voice engines, starting with a new Ring Mod feature for the wavetable engine and a Pulse Width mode for said engine's Phase Transformation section. The Harmonic engine gets Phase Modulation, there are more unison options and, for those who want to dive deep, the Modulator Oscillator now has ratio options and an extended hertz range.

Modulation editing has been sped up and left-right buttons let you flick between options in the multimode modules.

If you want to focus on the synth engine alone, the FX and Seq sections can now be bypassed in both the Synth and Play Mode views. New sync modes, meanwhile, enable you to experiment with different rhythmic ideas, and there's fresh compatibility with the MTS-ESP microtuning software.

On the effects front, improvements have been made to the Bitcrusher, Jup-8 filter, Multi Filter and Distortion. Finally, the sound library has been expanded with new factory presets, wavetables, samples and noise types. There are also four new sound banks on the Arturia Sound Store (these are free for new users). FM

"I made my dream synth": Hainbach's Fluss, is a granular playground

YouTuber/producer Hainbach and developer Bram Bos have announced the release of Fluss, a granular synthesiser and effects processor for iOS that's said to be inspired by experimental composer Iannis Xenakis.

The app, which runs standalone on iOS or as an AUv3 plugin, lets the user manipulate tiny grains of audio in a variety of complex ways, using a "kinetic" control interface that's geared towards live performance and realtime sonic manipulation.

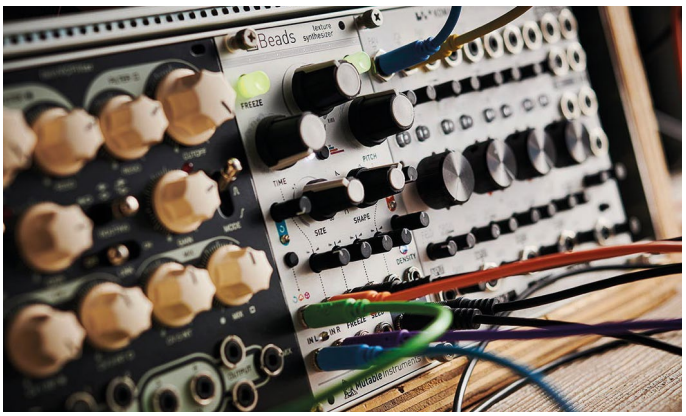
Under Fluss's hood is a 3-voice grain engine, which is capable of processing three sound sources independently. Each grain engine can be controlled via its own playhead, while two XY pads control scan speed, panning, pitch and more.

Both the XY pads and three central sliders are powered by a physics model that lets the user flick them around using the touchscreen. The dots in the XY pads will bounce like balls, reacting to virtual friction. This is a unique alternative to the traditional LFO that opens interesting modulation possibilities.

As for sound sources, the user can drag WAV files into Fluss, record audio directly, or process incoming input live. There's an extensive preset library featuring recordings of some rare instruments from Hainbach's collection, including a "1940s Ondioline, a forgotten East German piano, and Nagra-treated percussion".

There's a unique multi-mode filter modelled on the Oberheim Xpander, and a Shimmer feedback effect that feeds processed audio back into the grain engine for a shimmering reverb-like sound that can be applied subtly or pushed into endless loops.

Unlike many popular granular synth plugins, the app's also capable of pretty advanced pitch quantisation. Fluss pitch-shifts its output by default, according to scales and modes determined by the user, making it easier to integrate the results harmonically. €16.99/$13.99, available now in the App Store. FM



Mutable Instruments shut up shop for good

Having announced earlier this year that they weren't working on any more modules and that all existing ones would be discontinued, Mutable Instruments have confirmed that they have closed their doors for good at the end of 2022.

Mutable have been influential in the Eurorack market, releasing now-classic modules like Plaits, Marbles and Rings, and open-source designs used in other manufacturers' products (notably Arturia's MicroFreak and MiniFreak).

Back in April, Mutable founder Émilie Gillet said: "I won't design new modules and production is progressively stopping. Modules are marked as discontinued when the last shipment is sent to dealers. There is no easter egg, no plot twist, no teaser."

While production has halted, users can still contact the company for support and repairs until June 2023. FM

Korg's Modwave goes native

The trend for official software versions of contemporary hardware synths is one we're fully on board with. We've already seen Korg do it with its Opsix and Wavestate, and now the Modwave has been given the native plugin treatment, too.

Released in 2021, the Modwave is an all-digital synth that's loosely based on Korg's DW-8000, which is something of a cult classic. It offers wavetable oscillators, sumptuous filters, flexible modulation options, effects and hi-spec pattern sequencing.

As you'd expect, Modwave Native is cut from very similar cloth. In fact, it's fully compatible with the hardware – sounds can be exchanged between the two – and also supports any third-party sound libraries that are designed for the original Modwave (or for the Wavestate, for that matter).

Sadly, owners of the Modwave hardware can't have the plugin for free – a luxury afforded to owners of Arturia's MiniFreak when its software twin was released recently – though they can crossgrade to it for $50. The rest of us will have to pay $199. FM

FL Studio 21 is here!

Believe it or not, it's been four-and-a-half years since the release of FL Studio 20, which celebrated the DAW's double-decade anniversary. Sure, we've had plenty of point releases from Image-Line since then, but now it's finally time for FL Studio 21.

The headlining new feature is the integration of envelopes into audio clips – you can now adjust fade-ins/outs and levels in the Playlist on a per-clip basis. What's more, dragging one clip into another will automatically create a crossfade between them, leaving you to adjust the 'tension' until you're happy with the balance of it.

The look of FL Studio 21 can be adjusted with new themes, which themselves can be tweaked to your liking, while the upgraded file browser offers tagging, faster search and the option to preview a sample from any point on its waveform.

If you have the All Plugins edition of the FL Studio, you'll also get the new Luxeverb reverb, while the Vintage Phaser plugin (available in the Signature Bundle and up) models a classic effect used on *Oxygène* by Jean-Michel Jarre (Electro-Harmonix Small Stone, by any chance?).

The new Multiband Delay, meanwhile, is included in every version of FL Studio 21 from the Producer Edition upwards, and everybody gets the VFX Sequencer, regardless of which edition they're rocking. This is an "advanced" step sequencer that can transform chords into melodic phrases.

Other enhancements include expanded multi-language support (Spanish, German and French join English and Chinese) and a whole lot more besides.

FL Studio 21 is free for existing users as part of the company's Lifetime Updates policy. FM

Sonible takes AI to the limit with its quick and easy dynamics processing plugin

AI-powered plugins aren't going away – in fact, we'd expect to see far more of them in 2023. Before we get there, though, we have sonible's pure:limit, a smart limiter that promises to tame peaks, balance dynamics and find the right levels at the touch of a single button.

pure:limit is designed for people who want fast results and don't want to worry about tweaking multiple parameters. In fact, we're told that it offers "automatic parametrization", along with genre-based profiles and a visual interface that shows you what's happening to your signal.

You do have some control over the sound, though. The style selector enables you to determine how forcefully the limiting is applied, and the Inflate parameter increases vibrancy.

Find out more and download a demo on the Sonible website. pure:limit is available now for €49 and runs on PC and Mac in VST/AU/AAX formats. FM

Generate new musical ideas in Ableton Live

How can I create individually-processed vocal chops that I can sequence with MIDI?

In electronic music there are many genres which employ chopped-up, interestingly transposed and processed vocals as part of the instrumentation. These vocal chops can create great, interesting elements in a track without you having to source and record a vocalist. This technique allows music makers to use samples which can be made unique and original. Of course, recording and working with your own vocals will give even more originality to this process. In this article we will explore how we can use Live's Simpler device to slice vocals and to trigger slices with MIDI in both the Session and Arrangement View, instead of having to manually move many small audio clips on the timeline. Furthermore, in order to be able to get creative with processing and transposing each slice independently, we will take a look at how to convert the slices into a Drum Rack.

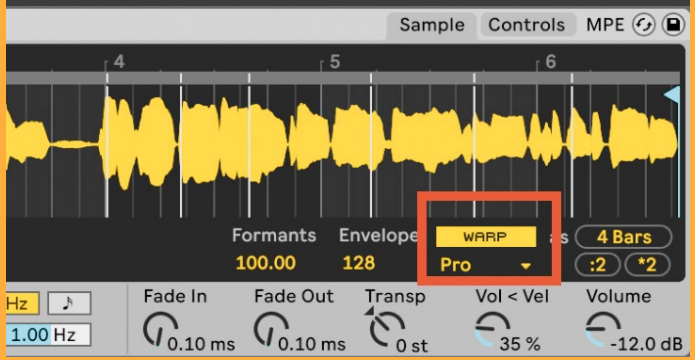
ABOUT THE AUTHOR

Anna Disclaim is a London-based audio engineer, producer, educator and Ableton Certified Trainer. She offers both classroom and individual tuition for all levels and abilities. To find out more, visit: **annadisclaim.com**

01

Warping and slicing the vocal loop in the Simpler

Insert Simpler onto a MIDI track and drop a vocal loop into Simpler. Switch to Slicing Playback Mode. Make sure the vocal loop is Warped internally with Complex Pro mode, as we will transpose it later. Switch the Slice by to Manual and create the slices in the Sample Area.



02

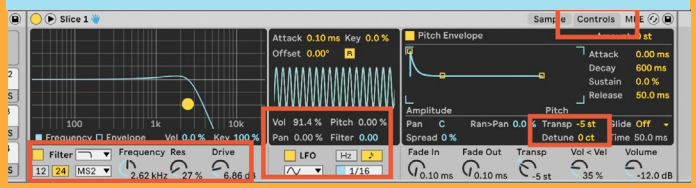
Slicing the vocals

To be able to transpose and process the slices we created independently, we need to convert the slices into a Drum Rack, so all the slices can be placed into their own Simpler devices. To do that, we Ctrl+click/right-click in the Sample Area and choose the Slice to Drum Rack option.

03

Transposing, filtering, and modulating the slices independently

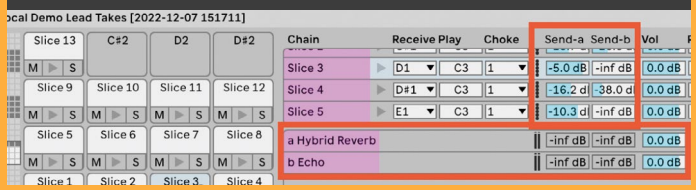
Now in the Drum Rack if we click on a Slice we can see it in its own Simpler device. Switch to the Controls panel where you can apply different transposition, filtering, and modulation to each slice one by one.



04

Applying effect processing to each slice

To apply different effect processing to each slice, we can use the internal sends and returns in the Drum Rack; set up different effects on the return area and send the desired slices to the effects. We can also simply drag and drop effects directly onto each slice within the Drum Rack.



TALKING SHOP

Hollie Kenniff

The ambient artist talks studio gear and shares her minimalist approach to music making

On her new release for Texan imprint Western Vinyl, Hollie Kenniff explores the complex relationships between memory and place through expansive, emotive ambient music. Titled *We All Have Places That We Miss*, the record deftly captures the bittersweet tang of nostalgia through gorgeously layered instrumentals that envelop synths, piano and guitar in a carefully chosen palette of effects and sonic processing, resulting in a quietly moving tapestry of sound that soothes and uplifts in equal measure.

Working within a genre that's traditionally been somewhat male-dominated, Kenniff draws inspiration from fellow female artists within the burgeoning ambient experimental scene, including Rachika Nayar, Ann Annie and Madeleine Cocolas, among others.

"A lot of ambient music that's been made up until recently has mostly been by men," she tells us. "Hopefully, with more women composing this sort of music, it will push this genre into some new spheres, with their own experiences and perspectives."

We caught up with Hollie Kenniff ahead of the release of the new project to find out more about her unique approach to music making.

When did you start making music, and how did you first get started?

"Although I had done various other music things beforehand, my husband Keith and I started making music under the moniker Mint Julep in 2010. It was mainly as a love letter to our shared admiration of shoegaze which we still continue to write and release material for.

"I always loved ambient music and started making that type of music specifically in 2017/18. It was refreshing to use my voice in a way that was not focused on traditional verses and choruses (in fact, no words at all) but more about texture and mood."

Tell us about your studio/setup.

"Keith and I share a studio in our home. I have always found it easiest to work from home rather than to have to commute to a separate studio. The key is always trying to be aware of that work/life balance so I try to have a work ethic that when I am in the studio it is focused on music and very much treat that as an office space rather than another room in the house.

"Our setup is pretty minimal, everything is done in the box, and we don't use any outboard gear, but I tend to use a lot of guitars in my work to create textures and parts, so I have a simple but effective pedalboard with a solid reverb/delay (Eventide Space), looper (ditto) and I *love* the Shallow Water pedal by Fairfield Circuitry.

"I also use the piano quite a bit. I think having simplicity in my workflow allows me to not get too overwhelmed by the number of tools and rather to focus on ideas and have it set up so that I can easily just create rather than tinker."

What DAW (or DAWs) do you use, and why did you choose it?

"Studio One. Keith and I both use it and it's the best of both worlds for mixing and music creation."

What one piece of gear in your studio could you not do without, and why?

"We have a G&L semi-hollow ASAT special from the late '90s which I use a lot. There's just something about an instrument as opposed to a synth, a slight imperfection. I think guitar is so overused in general, but there are lots of ways to manipulate the sound that makes it a unique tool."

What's your latest studio addition?

"We recently got a new piano (Yamaha U3) and it has such a nice lovely warm tone. Although we have a good collection of tape recorders in the studio, I find it so fun to play around with a lot of the tape emulation plugins that are out now. I really like Reels by AudioThing and Sketch Cassette. They're best used moderately but it's a great, quick tool to make something feel just ever so slightly worn."

What's your dream gear you'd love?
"I would really like to start dabbling in modular synths, but that is quite a rabbit hole! Also, there are so many amazing guitar pedals nowadays, so there's a pretty big wish list going right now on that front."

Where do you start on a new track?
"A lot of times, with the kind of music I write, I find it best to start with some sort of simple synth drone just to set up the overall texture or mood or a loopable riff on guitar or piano. I think the hardest thing about ambient music is knowing when to hold back. It's a lot more difficult than it seems."

What led you towards producing ambient music specifically?
"My husband Keith has been writing ambient music for quite a while (as Helios) and so over the years, even though I was a big fan of ambient music before he and I met, I've been exposed to a lot of aspects of this genre in the past 15 years or so.

"I think ambient music, even though it's still quite 'niche', has a bit more traction than it used to and there are a lot of exciting things happening within the genre and the overall community."

> "HAVING SIMPLICITY IN MY WORKFLOW ALLOWS ME TO NOT GET TOO OVERWHELMED BY THE NUMBER OF TOOLS AND RATHER TO FOCUS ON IDEAS"

What other artists do you look to for inspiration?
"As a female making music in this genre which has been historically male-driven, it is quite inspiring to see other women composers writing music in this genre. Also, I think there's been growing gains with women composers in other corners of the industry as well.

"Rachika Nayar, Sophie Hutchings, Julia Kent, Aisha Burns, Ann Annie, Rachel Grimes, Karen Vogt, Midori Hirano, Claire Deak, Olivia Belli, Forest Management, Madeleine Cocolas are among a few of many who I find inspiring."

If you had to pick one song/album that's been most influential on your work, what would it be?
"Kraftwerk – *The Man Machine*. I discovered Kraftwerk early on and it really made an impact on what could be done with electronic music and helped open the door to explore a lot of different kinds of music."

What do you think makes you unique as a producer and musician?
"I think not having a 'traditional' trajectory in this genre and starting this specific project later on, has allowed for some perspective in regard to what my intention of this music would be. I spent the better part of the last decade making louder music and I think it's been refreshing to switch gears in the past five years to do something almost exclusively textural, restrained, and open-ended and not to think about lyrics/song structure.

"I think a lot of ambient music that's been made up until recently has mostly been by men, so hopefully, with more women composing this sort of music, it will push this genre into some new spheres with their own experiences and perspectives."

What are you currently working on?
"My husband Keith and I are working on a new album as Mint Julep, as well as a new ambient project, and I'm continuing to work on more upcoming music for my solo material."

HOLLIE'S TOP TIPS

Be patient

1 **"Be patient. I think it's important to take time and consider what the intention of a piece of music could be. Rather than just making a 'cool track', what does this add to the general musical conversation?"**

Make the most of what you have

2 **"Learn to use the gear you have. I don't think gear is necessarily as important as it used to be, even though there are more options now. Nowadays people can make music very easily and I think it can be done on a very minimal setup. Sometimes restraint in this department can inspire creativity."**

Enjoy your own music

3 **"It's OK to listen to and enjoy your music. Sometimes I hear musicians (or artists/filmmakers etc…) say that they make something and then never listen to it after it's released or send it out into the world and let it go. I think it's OK (and not self-involved) to want to listen to your music! You're making music that is tailored to tickle your own ears, and hopefully will resonate with others, so it should be something you can sit with and enjoy as a listener as well."** FM

WANT TO KNOW MORE?

We All Have Places That We Miss will be released 30 January on Western Vinyl

Plump DJs **Eargasm**

Finger Lickin' Records, 2003

What a time to be alive! It's the dawn of the new millennium, and the blistering twist on the nu skool breaks you're pumping out is the hottest sound in the world. Andy Gardner and Lee Rous, aka the Plump DJs, were living the dream. After their early singles and remixes were assembled into the debut, *A Plump Night Out*, they found themselves at the forefront of dance music. Jetting off to Ibiza, soundtracking Levi's ads, supporting Orbital on tour, and headlining the UK's premier superclub, Fabric, like a coupla absolute superstar DJs.

The nights were late and the backslapping near deafening. But, work had to be done. Time to live up to the hype, raise the bar, make a world-beating second album, with the world watching. "It's not like we had a plan," chuckles Rous. "Suddenly, everyone's like, 'We need a second album!'. And you're like, 'We didn't even plan the first one!'. So, there was quite a lot of pressure."

Feeling it, they'd hit the studio at 10am, and not leave until the early morning. Often getting dubplates pressed up to road-test at the club, mere hours later.

"We'd wake up, work on tracks, play them out. Repeat," says Rous. "They had to sound good on Fabric's system, which was a luxury to use as well. We were locked into this kind of late night, more technical, sonically experimental aspect of our creative phase, back then."

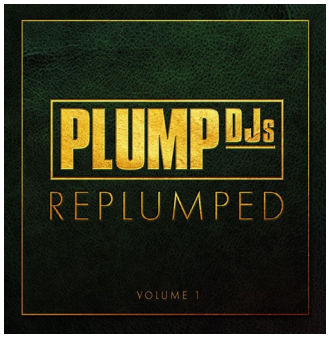
It also helped that his partner was a musical prodigy. "I can play guitar, but Andy's from a different place," says Rous. "He's got perfect pitch. He's a genius."

Add to that track-making vocals from star power like Lamb's Louise Rhodes, funk legend Eddie Bo and electro godfather Gary Numan, and the Plumps would find themselves with an album that surpassed all expectations. Even if it did take its toll.

"We were staying up far too late and partying too much," says Rous. "But, somehow, we managed to put it together, and there were some real gems in there. We got it over the line. But, it wasn't without a lot of effort." Well, them's the breaks…

Words by Roy Spencer

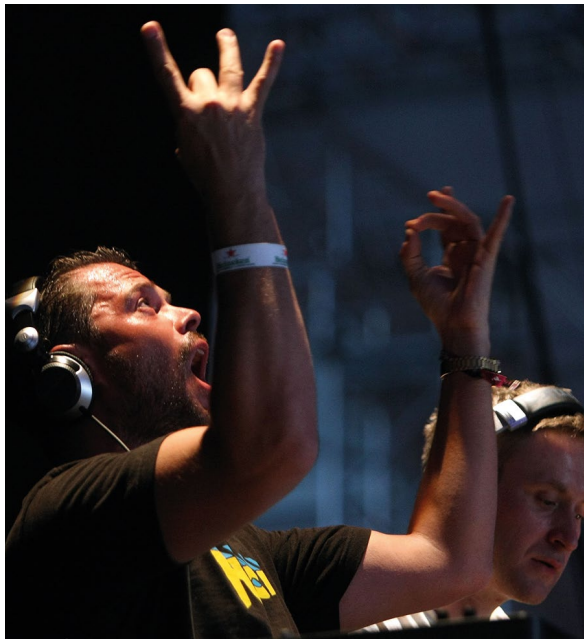
Track by track with **Lee Rous**



The first instalment of The Plump DJs' career-retrospective, *Replumped Volume 1*, drops this spring on Finger Lickin'. Stocked with 20 re-polished bangers from 1998-2010, it comes mixed and unmixed, with remastering bringing everything up to digital date.

Elsewhere, the breakbeat duo's new dancefloor joint, *Dreamland*, is currently doing damage on Krafty Kuts' re-booted imprint, Against the Grain, with remixes from Pirate Jams, Dirty Supercar, and Urban Dub.

And you can catch the pair on global festivals and stage this summer, as they head back out on tour.



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"The album title, *Eargasm*, was named after a shop we saw when we were out in Australia. We were struggling to find a record name at the time, and it just fit the bill perfectly. Obviously, it's a commonly used word nowadays. But, back then, we'd never heard of it."

Creepshow

"It became the first track on the album because we were playing loads at Fabric, and would open with it, so it made sense to do that here. And it seemed to fit naturally because it has quite an explosive start to it. And then it goes a bit more heads down with its groove. But, it seemed to work really well as an opener.

"I believe the main sample was from a Kool & The Gang record [*Rated X*]. And the reason we were allowed to use that record was because it was cleared, in the end. We approached them to sort it all out, but had to give all the publishing away for that sample."

Weighed Down

"Kim Kalan on vocals. She was on our first album on the track *No Way*. Then Andy [Gardner] did some vocoder. Then we sampled that song, *Solid As A Rock*. The vocal goes, 'And builds it up, and builds it up, and builds up, and builds it up!'. So, it was quite a repetitive record. But, it used to go down when it dropped in Fabric. Those vocals really used to hype up the room!

"That was our luxurious situation, you know? We could test all this stuff in that club. We would pick up dubplates at two in the morning. Get to Fabric for three. And be on the decks at four, with these brand new tunes to play for the first time."

The Funk Hits The Fan

"This has vocals from funk legend, Eddie Bo. He didn't come to the studio. We sampled him from a record [*If It's Good To You (It's Good For You)*] we found in Soho.

"We used to love going into the bargain basements and finding lost records to sample, or get inspired by. And I found this repress, and it had the acapella on and I was like, 'Oh wow, we've got to use this in a track!'. So, we did, and had lots of fun.

"The breakdowns were really good, the way it was orchestrated. When we play this to our hardcore fans, they literally chant the breakdown, which is really good fun."

In Stereo

"This had a nice repetitive little vocoder voice going, 'Stereo sound'. Then a big fat Juno bassline. We used to really like the Juno's bass quality. This one is all about that massive bass that comes in, with that funk P-funk feel to it.

"I think Andy had done a tune on his own that I was really vibing on with that groove, so said, 'Can we make another one with a bass sound that's a bit similar to that?'.

"Then we had a sample in there, like a really kind of innovative, kind of white noise-y reverse sample, which goes throughout the whole thing."

The Gate

"Back then, if we came across a way of manipulating sound in the studio, we'd try and push the boundaries on that certain technique.

"Here, I was aware of using gates to break up vocals and stuff. Then we both came up with this idea of like, 'Let's just have a record where everything is gated!'.

"Then we were like, 'Let's try and gate some Doppler sounds!'. So, in that record you've got lots of stadium structures, and then breakdowns of all these kind of panned Doppler effect sounds, gated.

"It was a way to trip people out a bit. Just a really hedonistic breakdown, you know? It really was an 'Eargasm' [*laughs*]."

Morning Sun

"For this one we got in Louise Rhodes from the group, Lamb. She's an incredible woman. And that was a moment. She came into the studio and she was very humble and very nice. She loved the backing track and said, 'I hope you like what I've done for you,' and she then belted it out. All of the hairs on our arms stood up.

"That was also a big departure for us, it being a very chilled out kind of a piece. But, we've had all sorts of amazing feedback over the years with people using it as a wedding record and stuff. I'm getting emotional now… [*wipes away a tear*]."

Mantra

"That was more of an early electro-inspired record. Andy had come up with this idea of a repetitive motif. I think it was a bit like *Tubular Bells* when they used it in the film *Weird Science* – when they wake up in the morning, and everything's upside down and kind of spooky. And we were pushing the boundaries on various different things, too. We tore a piece of paper really slowly and recorded that. And then put a stereo effect on it, and panned that around.

"We wanted *Mantra* to have that repetitive mantra to it. Yeah, as the title suggests. That's the singular thing that we bring tracks back to, all the time."

Pray For You

"The legend, Gary Numan on this. We just got in touch with his management and very quickly we had his direct number. And, here's me, a car cleaner from Uxbridge. Now I'm working in a recording studio in central London calling Gary Numan!

Talk about imposter syndrome. Fortunately, he was up for it. And we made a record with him in mind. And then he came back with some vocals, which were fantastic. And the record goes to so many places.

"In retrospect, we would have done better to have kept things a bit more simple. But, we were just like, 'The record's got to be amazing!'. It did come out well, though."

> "HERE'S ME, A CAR CLEANER FROM UXBRIDGE... CALLING GARY NUMAN! TALK ABOUT IMPOSTER SYNDROME"

Something Goin' On

"That's like our blues-inspired track. Sampling Bo Carter [*Blue Runner Blues*]. Another random record find, I think. I love old funk and soul and blues. I DJ at The Blues Kitchen in Brixton between shows these days, which lets me drop all this stuff I love. It's what we grew up with. And this sample was just a real random find. And we wanted to do you know, a nice, chunky, slower funk record, with kind of infectious vocals.

"We love sampling, and we love presenting ideas into new scenarios. And yeah, rethinking old ideas in music."

Contact Double Zero

"There's a really bizarre two-bar fill in the middle of that record that me and Andy had been arguing over. I was like, 'Why are we doing this? It's quite a kind of metronomic record.' And he was like, 'Yeah, but I just want people to know we're pushing boundaries...'.

"I think that really illustrates that time. There could be frustrations, which can lead to good ideas, but we were getting pulled apart a little bit on certain things. Some of our fans wanted us to stick with the funk. But, this was the start of us getting into Fabric and building on that sound."

How Much Is Enough

"I really love that bassline. I was talking to Andy the other day about what we used for the bass for this track. I think it was the WASP synth. Andy seems to think it was the ARP 2600. We were very high most of the time back then so could have been either, or both, to be honest [*laughs*].

"It's probably written on the side of the album sleeve. We wrote all of the analogue synths down that we used on there, if anyone has a copy.

"Andy is an analogue nut when it comes to keyboards, too. I mean he's the studio man. He's the studio genius, as it were."

Cry Wolf

"We sampled Terence Trent D'Arby on this one [*As Yet Untitled*]. I think it was just an acapella. It was a really haunting vocal record that he made on his album.

"Then we made it into a really dark record. It's like the vibe of a horror movie. It's a very eerie tune with a galloping, rolling breakbeat to it.

"It's an intense record. And, funnily, one that is quite requested. And I'm always like, 'Really?'. We were called the Plump DJs. And we liked our funk. And we were known for our fun and our humour. And this was us investigating the dark side of our personality. Yeah, interesting record."

Tilt

"I think we needed a record that we felt could close the album. And just chill it out a bit. And it has kind of quite an Ibiza kind of vibe to it. And we'd been going out to Ibiza and been really enjoying playing there for the first time. That started to get under our skin.

"I think the track sort of follows the personality that's similar to *Morning Sun*. It takes that vibe on, and completes it a little more, to my mind. It's a nice instrumental finish. Good closer." FM

WANT TO KNOW MORE?

For the crew's latest news, free downloads and DJ mixes, head to **plumpdjs.co.uk**

In The Studio With Lee Rous

"It was made in Andy Gardner's studio. The setup was very simple. We just had literally two Yamaha NS10 speakers, a Mackie desk, Logic – a pirated early version of Logic, on the computer sequencer, and an Akai sampler. Andy used a vocoder on some tracks. And you know, a couple of synths. I think the Sequential Circuits Pro One, the Juno-106 for some fat bass, a Roland SH-101... not a lot. A WASP synth. The ARP 2600. And a couple of guitar pedals and, you know, basic outboard effects units. And we just made the best of what we had.

"Then we would sample records on the Technics decks, from digging around bargain basement record shops for ideas and loops. The tracks would take weeks to make. And because it was a very old Mackie analogue desk you couldn't really just start another session and start working on a different record. So, I guess, if we were making a track, we were making it until it was finished. That's just the way we worked back then."

LIKE IT? TRY THESE...

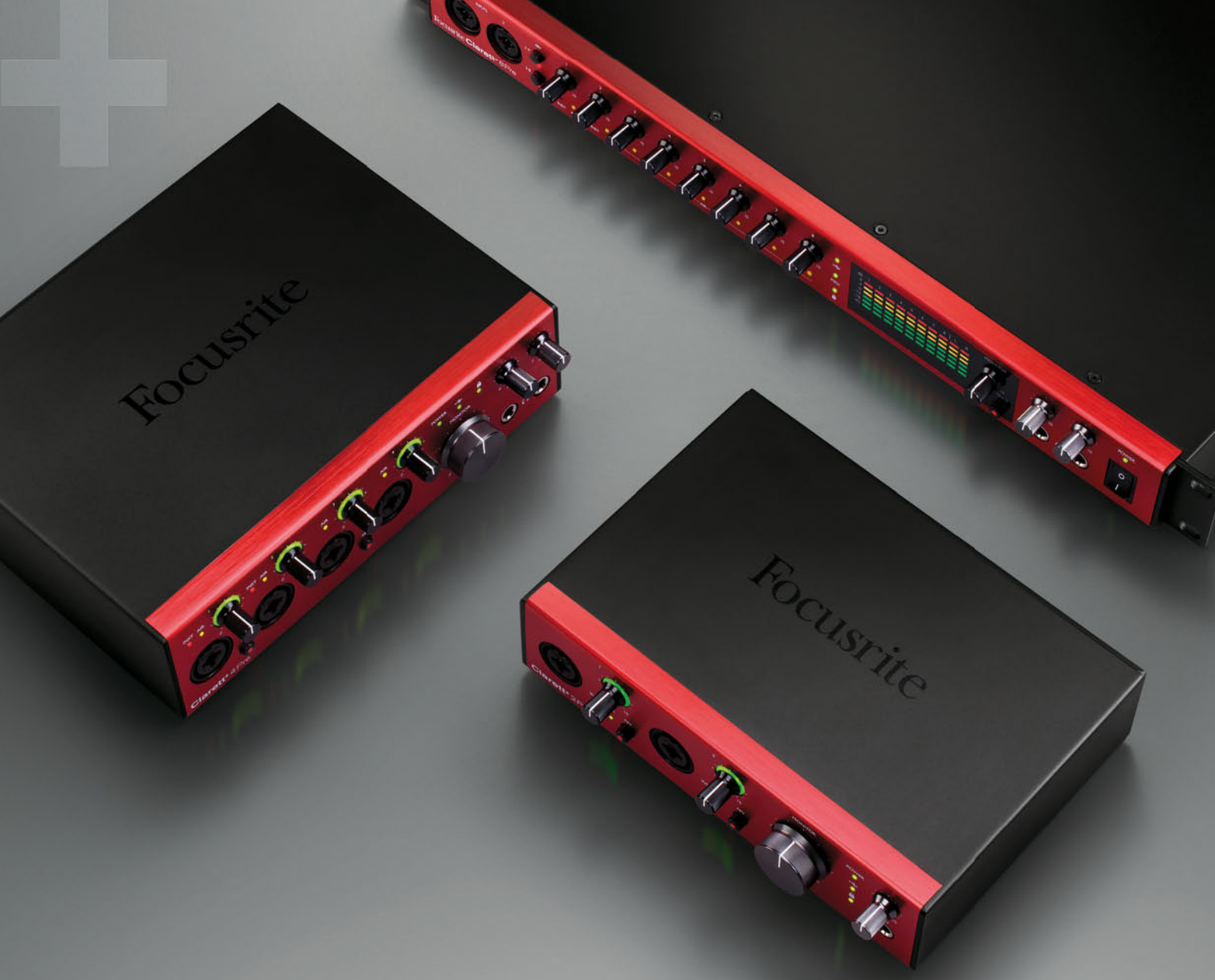
Plump DJs
A Plump Night Out
The debut album, mixing up all the duo's singles and dancefloor remixes into one banging millennium-ready package.
ADD THESE TO YOUR PLAYLIST:
'Galaxy (Plump's Remix)', 'Electric Disco', 'No Way'

Lamb
Between Darkness And Wonder
Lou from Lamb does a sublime turn on *Eargasm*. So, here's more of her achingly beautiful vocals from 2003.
ADD THESE TO YOUR PLAYLIST:
'Darkness', 'Stronger', 'Wonder'

Various
It's A Finger Lickin' Thang 3
Super label sampler from right around the era, featuring the big tunes from the best of the roster.
ADD THESE TO YOUR PLAYLIST:
Drumattic Twins – 'Mind The Gap', Plump DJs – 'Creepshow', Soul Of Man – 'The Real Acid Punch'

Plump DJs
FabricLive. 08
Mix from the height of their celebrated residency at the club, when breaks ruled the world.
ADD THESE TO YOUR PLAYLIST:
Plump DJs – 'Squeaks And Bleeps', Move Ya! – 'Dope Freak', Punx – 'The Rock'

Plump DJs
Replumped Volume 1
Remastered album of 20 of the juiciest beats from the start of The Plump's bulbous back catalogue. Fat A.F.
ADD THESE TO YOUR PLAYLIST:
'Rocket Soul', 'The Push', 'Get Kinky'



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50 WAYS TO KICKSTART YOUR NEXT TRACK

Overcome writer's block and create your freshest ideas yet with our bumper crop of inspiration-sparking tips and tricks

When you're inspired, the creation of electronic music can feel effortless. Every sample you select is the perfect one, falling into place on your DAW's timeline like magic. Firing up and triggering a synth instantly inspires a bassline or hook. MIDI notes and audio build up to create a composition you never could've planned. Once those creative juices are fully flowing, it feels like the music is writing itself.

If you've experienced this zen-like state, you've probably been through the complete opposite, too: those times when a blank screen remains overwhelmingly empty, and every technique is doomed to fail. The harder you push against this creative drought, the more stress builds up. If you do push past this 'writer's block' somehow, you can end up with a track that has all of the functional elements of a track (drums, bass, chords, etc), but lacks the spark and magic of something truly special. Though there's an art to making music, us electronic musicians are lucky in that we have technology on hand to help us. The secret is recognising when your gear – hardware or software – is hindering your creativity, then hacking that tech to get around the problem.

This issue, we're here to help you beat the block and create your best ideas ever. Over the following pages, we have creative challenges for you to try, gear ideas to inspire new sounds, and insight from a multitude of artists on how they like to begin their projects. But first…

WHERE TO START?

Let's start with the basics – where exactly should you start your next track? It sounds like a simple question, but there are so many potential answers that paralysis of choice – ie, being confronted with so many options that it's impossible to pick one – can be a real issue. Do you start with an intro and build up as the song progresses, or start in the middle, creating your fullest element – the drop, hook or chorus – and then work subtractively? Do you start with drums first and nail a rhythm, or create a melody and build from there?

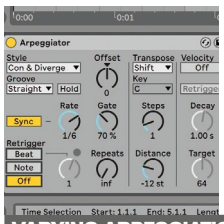
There are, obviously, no right or wrong answers to this, and often we're fortunate enough that inspiration will strike us and the whole process comes naturally. For times when this isn't the case though, there are a number of tactics we can employ. The first is to mix things up. What was the starting point for your last track? Take that and flip it on its head. If you usually tackle drums first, write some melodies, if you last started with a drop, try creating an intro or breakdown first.

Another reliable way to overcome a creative blockage is to avoid the blank canvas. An empty DAW project can be daunting. Try preparing a template for your project before you begin, with commonly used instruments and effect sends in place. Perhaps even sketch out a template arrangement with MIDI clips. You could also try creating an ambience or backdrop, with some found sounds or a lingering drone, to give your creations a little context and not seem so exposed.

LET THE MACHINES DO THE WORK

When you're in a creative lull in the studio, judge whether the technology at your disposal is helping or hindering you. Having a small selection of hardware and software tools you know inside and out will help to narrow down your palette of options, but even then, you'll probably have more options than you actually need.

One way to 'defeat the machines' is by working out how you can use them to assist the compositional process. Strip things back and give these five creative approaches a go…



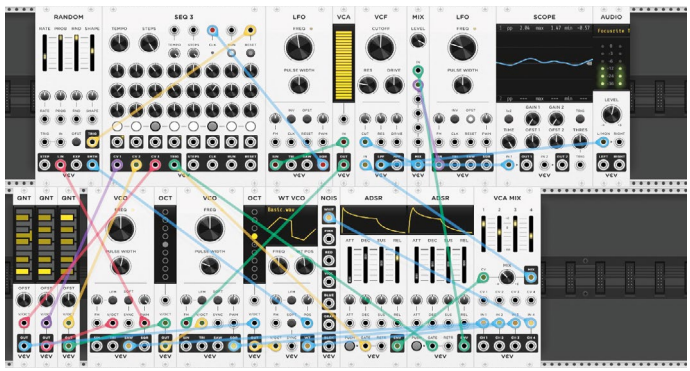
VARYING ARPEGGIATIONS

01 Arpeggiators can be great tools for turning a simple chord progression into something with more rhythmic interest. By layering multiple arpeggiated instruments on top of one another, it can be possible to inspire more than just a single line, and potentially create enough elements for a full track. Start by creating a simple chord progression and arpeggiator, then copy this across two or more MIDI tracks in your DAW. The trick is to change the parameters of each arp to create different patterns that interact with one another. One could be in a straight 4/4 rhythm, but another in triplets? One could travel downwards, while the other goes up? Try pitching a copy of your main arp line up an octave or two and then randomising the pattern. You could even feed an arp into a drum machine to create a rhythm track.

SIMPLE SOUNDS, COMPLEX EFFECTS

03 We often devote a lot of our creative energies to designing or recording sounds, then use effects for a final polish. Try flipping this dynamic on its head though, by taking a simple sound source – say, a sine wave, kick drum or simple piano chord – and using a complex chain of effects to completely reshape it.

Stacking multiple delays with a wet/dry setting over 50% can turn a single hit into a whole rhythmic pattern, and pitchshifting can transform a melodic line too. Tools such as comb filters, resonators or extreme reverbs can utterly transform even a basic sound into something epic and inspiring.



SELF-SEQUENCING SYNTH

04 **Try designing a synth patch that does all the work for you. We're referring to those kinds of presets that sound like an entire track at the push of a button. By combining multiple oscillators, LFO-driven noise rhythms and other tones, all running at different rates and speeds, you can generate uber-complex sounds that can define an entire tune.**

Modular synths are ideal for this, both in the hardware or software realms. Anything that lets you freely route rhythm-generating elements like LFOs, looping envelopes, clock dividers or sequencers. VCV Rack provides an excellent way to explore these ideas for free in software.

PROBABILITY AND RANDOMISATION

05 Probability sequencing is everywhere these days, from DAWs like Live and Bitwig to hardware from Elektron, Korg, Novation and many others. These are great tools for inspiring new sequences. Create a pattern where the root note has a 100% probability but everything else has something less, meaning your pattern will change a little with each cycle. Let the sequencer run and record the results, then edit out and keep your favourite variations.

SLICE AND EDIT

02 **Got a loop or melody you like but aren't that inspired by? Grab a sampler and slice it, using, say, Ableton's Slice to MIDI or Logic's Quick Sampler slice mode. This will let you rearrange the original loop as a MIDI file until you find a rhythm or pattern that grabs you. Try using a step sequencer or arpeggiator to help you flip the original loop on its head.**

CREATIVE CHALLENGES

Restricting yourself in the studio can be a great way to boost your creativity. Test your production skills with these project ideas…

When you sit down in front of an empty DAW, your creativity can often feel stifled by the overwhelming number of options you can choose from. A producer's hard drive is typically stuffed full of dozens, or even hundreds, of virtual instruments, sample packs and processing plugins. And that's not counting the myriad of hardware synths and outboard gear that are all plugged in and ready to go.

The secret to overcoming this 'decision paralysis' is to firstly recognise that it's a problem, then impose some kind of creative limitation designed to rewire your thinking. After all, back in the day, producers and engineers were limited by the primitive gear they had to hand, and worked around low track counts and meagre sampler channels to wring every possibility out of less gear.

GET OFF THE GRID

06 Feeling restricted to a grid? Then try working with quantisation completely disengaged, and place all your hits by ear. This'll help get you away from your usual formulas and encourage some new ideas.

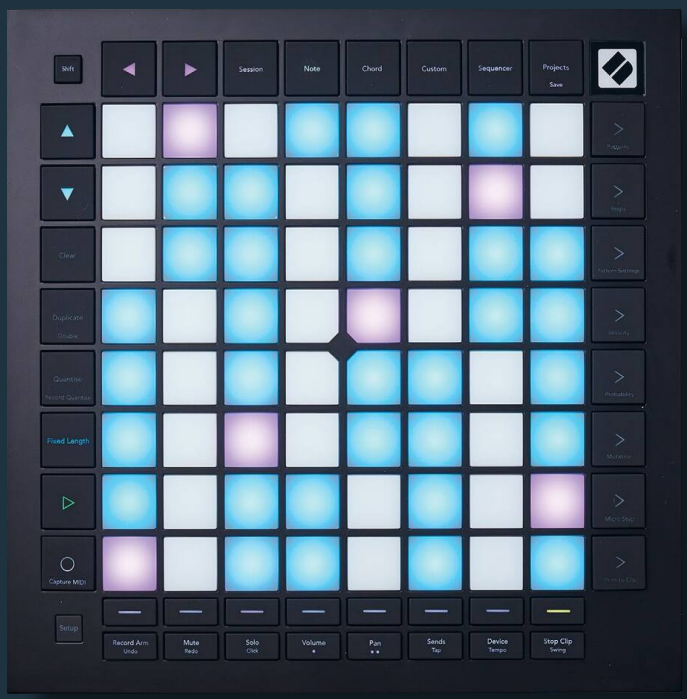
LESS IS MORE

07 It's all too easy to pile up unlimited audio and MIDI tracks in a modern DAW, which is why you should regularly practise making tracks with super-low track counts. Capping yourself to, say, four or eight tracks in a project forces you to wring the most out of every sound.

Give yourself a hard limit and, if you need to add something more, find a creative way to work around it. Perhaps you could save space by bouncing several parts down to a single bus track, then process and edit them as one? Or find a way to use a single plugin instance or hardware instrument to generate multiple sound elements, such as synthesising both a kick and snare.

SINGLE SYNTH SESSION

08 Why not try making an entire track using only one drum machine or synth? Not only will this make you think creatively about how it can be used, but you'll also grasp the instrument's nuances and learn it a bit better. This approach can be a great way to flex the sonic muscles of a synth you know really well, but it's even better when applied to a new or underused bit of gear. Got a plugin on your hard drive that you picked up cheap and never really explored? Or an unloved synth that's been gathering dust? This could be the perfect time to dive in and explore what it can really do. Read the manual front-to-back and really dig into the capabilities of what your chosen instrument can do.



SWITCH YOUR PLAYING OR PROGRAMMING APPROACH

11 **How do you usually start a track? Maybe by playing chords on a keyboard, using a hardware sequencer, or drawing beats onto a MIDI grid? For your next track, try banning yourself from composing in your usual manner and adopting a different approach. Try switching out your usual keyboard for a pad controller like a Novation Launchpad or Ableton Push. Got an old guitar gathering dust in the corner? Use that to write your next chord progression instead of your go-to synth. Do you usually create MIDI patterns in your DAW? Try using a hardware step sequencer, or a plugin emulation.**

SAMPLE FLIPS

12 How about picking one sample pack based on a completely different genre to the one that you produce? If you happen to be a techno producer, for example, why not try restricting yourself to creating a track using sounds from a reggae or drum & bass sample pack? See how you can reshape the sounds to fit your own style – or let them take you off in a completely new direction.

PRESET BAN

13 Presets can be incredibly useful. It can, however, be a little too easy to settle into a rut of reaching for your favourite go-to sounds and patches. For your next project, try an outright ban on presets. Whether you're using hardware or software, start from an initialised state and build your sounds up from scratch. The same goes for effect treatments – ditch those tried and tested compressor settings, delay treatments and reverb patches and shape your sounds by ear from the ground up.

RECREATE THEN REMIX

09 Nobody wants to plagiarise another musician's work, but it's also true that inspiration doesn't exist in a vacuum. Every great idea in the history of music is on some level built on whatever's come before it. There's no shame in using a track you admire as a jumping off point for your own ideas.

If you're stuck for where to begin, rather than creating a track of your own from the ground up, try recreating an existing track and then reconfiguring it to make it your own. Load up a reference track in your DAW and go through recreating it as best you can, piece-by-piece. Once you've got an approximation of a full track – effectively a demo cover version – it's time for the fun to begin. Edit, rearrange and remix until you have something far enough away from the original inspiration that nobody could identify your source material. Adjust melodies, reconfigure track elements and swap out sounds for something completely different.

PICK A FAVOURITE ARTIST AND TRY AND CREATE SOMETHING AS IF YOU'RE PITCHING IT DIRECTLY TO THEM

DJ TOOL

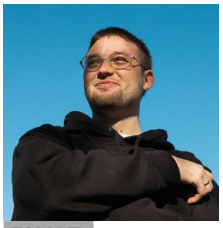
10 Necessity is the mother of invention, and one great way to inspire your next track is to try and write something to fit a specific need. That could be a tool to fit somewhere into a DJ set – such as the perfect peak time banger, a loopy groove that's easy to mix over, or a track designed to help shift the mood or tempo. The same principle can be applied if you're a live performer. Try writing a great set opener or closer. Don't DJ or perform yourself? Pick a favourite artist and try and create something as if you're pitching it directly to them.

ARTIST TIPS

Take inspiration from these top artists on the art of starting a track

Opening up the blank canvas of your DAW can be an intimidating prospect for all of us, not just those at the beginning of their journey into music production. The question of where exactly to start when you're building a track is one that's puzzled artists of all stripes, from bedroom beatmakers to hit producers, and each one has different methods for taking that first leap into the creative abyss.

We've spoken to more than a few accomplished music makers over the years, asking each artist how they typically embark on the creative process and get started on a track. Here's what they had to say…



TOM VR

14 "I will often just pick a random project that I ditched months back and export it, drag it into a new project and manipulate it, then work on top of that. Almost like starting by messing around with a sample, but it's my own discarded material. Recycling my old ideas and then building on top of them, that's usually my process."

Jas Shaw starts with a 'what if' approach, creating problems that he then needs to solve in the track

JAS SHAW

15 "I tend to start with a 'what if' type idea, and usually it involves undoing something that was working and replacing it with something else that most likely doesn't work yet. Then it's a problem solving exercise that eventually results in a new working system. Secretly, the whole time I keep my ear out to see if it makes music for me. Once it's working it's not very interesting, so we start again."

SHEEP, DOG & WOLF

16 "Usually I'll begin with a series of chords. Sometimes from piano, sometimes guitar, sometimes from vocal or saxophone improvisations. I'll play those chords over and over and over, getting a loop going, then layer things up from there."

For Roosevelt, the drums and the bassline are usually the foundation of a track

ROOSEVELT

17 "That really depends on the idea, but it's often based on a rhythm track. I'd record a drum beat and add a bassline on top. Drums and a bassline are often the fundament of a track for me, and I think you can hear that as the bass never plays just a functional role in my productions, it's always adding a groove pattern."

GOOSE

18 "It can be a melody you recorded on a phone, a drum loop, anything basically. After all those years we can say that we all have a couple of ways to approach a new track, but there is no formula – luckily! Making music is supposed to be done with magical, childlike enthusiasm; that's why we do it. With every new song, I'm wondering where it came from."

MODEL 86

19 "Up until recently I was starting with vocal samples but I've just changed my workflow. I've just sworn not to touch any samples at all if I can, just start on an instrument and vibe and manipulate stuff more organically and go from there."

COMA

20 "Recently we've liked starting with an interesting-sounding instrument, which ends up putting a very unusual effect chain on a Rhodes, or download free animal sounds from a sample library and try to create an instrument with this on a sampler."

Emptyset suggest pushing a very limited sound palette to discover a unique voice

EMPTYSET

21 "Often it's much more interesting to develop a system for making music before you commit to making music. For example, you might limit yourself to recordings of playing your table percussively and then using extreme EQing. In trying to push a very limited sound palette as far as it will go you might discover a unique voice."

HOUSEMEISTER

22 "I'll have days where I just program patterns and sounds. I might sit for a day just playing on the Analog Rytm programming beats. When one pattern is done, I don't start a track, I just go to the next pattern and do it again – and so on. I'll do that with all the machines, more or less. Then another day I'll switch on the studio and a track is already there… by accident. I'll find a nice hook made with a synth, then I already have loads of beats to choose from. It's then a bit like a DJ set – all the instruments are the records which I mix."

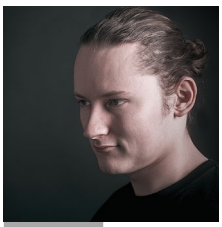
Housemeister spends days programming on different machines, then "a track is already there… by accident"

EX MYKAH

23 "When I start making a new track, I try to start with the story. This goes for classical music too. I feel like if I have a general idea of what kind of song I want to write, that really helps zero-in the production for the song. Otherwise it feels like I have way too many options."

SUICIDEYEAR

24 "Usually when starting something new, it's always melody that comes first. Most times I'll come up with an arrangement and try a few different sounds/VSTs with it and decide where I want to go. I like to work on more melodies before going to drums, because, when I start making drums I get into a finish mode. Leaving the melodies open-ended/free of drums helps me build on it more."



PYTHIUS

25 "I try to start with writing a riff, since (at least for me) I noticed that putting drum patterns in early kinda dictates where the riff is going and that restricts creativity. Or I start with just messing about with a synth and build some sounds and sometimes that really helps with getting new ideas for melodies and riffs too."

FVLCRVM

26 "Over the years it's turned into recording ideas to my phone. Could be a sound, a hook or a drum beat. Sometimes I do it on the street, pretending I'm calling someone! But I guess it's not common to beatbox to someone down the phone… So I act like I'm on a line to tech support and I wait for an answer while whistling. I know. I often take what is recorded and throw it straight into Live. The melody/beat-recognising algorithm is magical. And offbeat/off-scale stuff is sometimes really interesting."

5 PLUGINS THAT CAN GENERATE FRESH IDEAS

27

AUDIOMODERN

PLAYBEAT/CHORDJAM/ RIFFER

Recent years have seen a rapid rise in plugins that auto-generate elements of your track. While Mixed in Key offer useful tools, Audiomodern's plugins are some of the best. Playbeat, Chordjam and Riffer aim to help you create new ideas, each focused on a different track element – drum patterns, chord progressions and bass/lead riffs. What marks these plugins out is the balance they strike between 'doing it for you' and offering tools that let you shape the generative process. Playbeat offers fine control over which beat elements get randomised, and learns from your creative decisions.

28

XLN

AUDIO XO

XO is an innovative beatmaker that aims to help you discover forgotten or overlooked corners of your sample collection. The idea is that users add all of their one-shot samples, which are then analysed in order to create a 'space' that maps them all by timbral qualities and style. Why is this inspiring? The key appeal is that it will help you branch out from your go-to drum hits and percussion tones by quickly browsing through similarly pitched samples, even if these are stored in completely separate folders.

29

ENTONAL

STUDIO

'Microtonal' is a bit of a buzzword in music production these days, but it's nothing new – Aphex Twin were making microtonal sounds in the '90s, and classic composers have been exploring microtonal ideas for centuries. 'Microtonality' involves using intervals smaller than semitones – ie, moving away from the traditional western 12 tone chromatic scale. Sound complex? Well the good news is Entonal Studio makes experimenting with microtonality easy. It can host your favourite synth plugins, turning them into microtonal instruments, and has a clear UI and plenty of presets to experiment with.

30

KORG

WAVESTATE/ OPSIX/MODWAVE

Korg's trio of digital synths are some of our favourite hardware instruments of recent years, and they're now all available in your DAW in 'native' plugin form. The key feature in all three is the patch randomisation tools. Effectively, these allow the user to roll the dice and randomise all parameters in the sound engine. Does this always sound good? No. But it's easy enough to take another spin and keep going until you hit on something inspiring. The process can be tailored to focus on just specific elements or ranges too, meaning the randomisation can be far better targeted.

31

OUTPUT

PORTAL

Granular processors are particularly good sources of sonic inspiration, since they span the remit between creative sampling and delay, meaning they can transform sounds both in terms of pitch and rhythm. There's a multitude of quality options worth trying in this sphere, including the Max for Live plugin Granulator 2 and Arturia's recent EFX Fragments. If we had to pick one granular tool that's especially good for quick inspiration though, it would be Output's Portal, which benefits from an approachable UI and excellent list of varied presets.

ARTIST TIPS

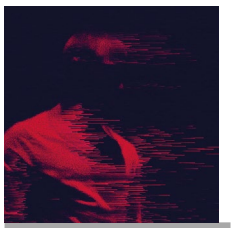
Seven more successful artists reveal their creative process

SCHOOL OF X

32 "In general I'll have a melody recorded in my memos or I'll start making a chord progression. Then I usually pick up a bass or drums. It can also be the other way around. I'll have waves of recording lots of things and deleting. I try to kill my darlings. It's important to tell yourself that there will be slow, less productive hours in creativity but it's all part of getting where you wanna go."

JENNIFER TOUCH

33 "Mostly I start with a synth sequence from a single synth, I never play more than one, I just concentrate on that sound. This is the heart of the song or track. Usually a bass voice. Then I'll add drums and try to get the vibe. Then I try vocals or another synthesiser or a guitar to wrap a melody around it. Usually the vocals are the last part of the meal. Once the basic notes are established, I go into individual parts for structuring, do the actual songwriting and put things in place."



SELECTIVE RESPONSE

34 "Here's something funny for you: I have no idea how I make the music I do. Like, I can tell you how I made it, but sometimes I listen back and think, 'where did I even come up with that sound or idea?'. I enjoy pressing play and making things happen as I go. I have a rule that I must record a rough draft when jamming. Even if I don't do anything with it, if I have a rough draft, I can either chuck it or have a foundation to work at."

BECKER & MUKAI

35 "We normally hook up a load of hardware, often the Roland Juno-60, the TR-707 and TR-727… and with those create a bed for experimentation. We press record and let it roll for a long time, often 30 minutes, sometimes more, and create ideas from those long sessions. We'd include some random pieces of gear that happened to be around and try to push them to their limits."

NIKLAS PASCHBURG

36 "I usually start on my piano and see if some melodies or harmonies inspire me. But it depends on the day and mood – whether I feel more into acoustic or electronic instruments. Sometimes I start with the OB6 and go later to the piano. I try to have every instrument ready to record so I can quickly jump to the synth or percussion instruments."

JONATHAN BREE

37 "It really depends. There are so many ways I can jump into a track. I suppose more recently I've begun with a groove. Drums were my first instrument, so I'll record a beat, multiply it out for a minute and then start fooling around on whatever other instrument. Melody tends to come next and then I'll vocalise gibberish over the top until a certain word or sound gets a foothold."

AMIRALI

38 "It's different each time, there's no rulebook for me. Sometimes it starts with a melody or harmony, or it could simply be a bassline or a hook. There are also many times when I just press record and start jamming for half an hour, playing with the piano or a synth, then manipulating the sound and going crazy with it."

Niklas Paschburg says: "I usually start on my piano and see if some melodies or harmonies inspire me"

ARTIST TIPS

Our final batch of creative gurus share their tips on getting started

Jimmy Edgar invents games with music: "I like to have fun and make my own parameters"

FAHRLAND

39 "Everything I do in music is trial and error, watching others, thinking outside the box and staying true to your feelings. Sounds easy, but it's an everyday challenge. Sometimes it's difficult to find a musical detail worth making a song out of. It may be random jamming on new gear, or just the radio. It's not always the 'how', but also the 'why?'."

HYPOXIA

40 "For my Hypoxia material, those compositions begin with selecting one instrument from my collection, taking it out of the studio and isolating myself with that instrument, trying to create something compelling within that instrument's limitations."

LAPALUX

41 "Thinking of music in a visual sense can really help break away from times where you feel uninspired. I like to try and write music to an image sometimes, moving or still. I find it really helps break away from stagnated ideas and the feeling that you're stuck sometimes when creating music. Go to a gallery and research some artists that you find interesting, and try to recreate their work using sound. Likewise, watch a scene from a movie you love and try to build ideas and sounds that you think work with the visual in context."

Lapalux suggests: "Go to a gallery and research some artists and try to recreate their work using sound"

VISIONIST

42 "I like to gather a lot of sounds for a project and then work from them multiple times, this keeps a sonic consistency… Depending on what I want the track to represent determines whether I start with drums/sound design or melody, but the starting point is gathering and making sounds."

RURAL TAPES

43 "I enjoy using improvisation as a method for creating and composing. I can start with a drum beat, a weird sound, a drum machine, a series of chords, a simple melody or a field recording. Sometimes I can press record and tape for hours. Then I can pick out parts that I like and keep on layering them. There are no rules for the process of creating music in my world. I work very intuitively and usually I don't have much planned before I start. Sometimes I end up using plain structures for a song and sometimes the lack of structures can be better."

PROJECT PABLO

44 "The flow varies from time to time, but I usually build a palette of sounds, then start with percussion and move from there. Sometimes I'll just record as many different sounds as I can from some hardware, with no tempo or overall vision in mind, and save them in a folder to sample or rework at a later date."

JIMMY EDGAR

45 "It can start with an idea of any kind. A beat, a melody or chords. I like to play games with music when I am coming up with ideas for myself. My session last night was playing with chord progressions and reharmonisation using the Studio Electronics Omega 8. I wanted to see if I could make a song in which each bar is its own song and doesn't repeat. I like to have fun and make my own parameters."

STRIKING THE RIGHT CHORD: THEORY IDEAS

Even if we're not all virtuosic players, most of us can string a few simple chords together to get a basic melodic idea down. The hard part, sometimes, can be moving from a pleasant but basic progression to something that can form the body of a track. Try spicing up your ideas with these simple tips.

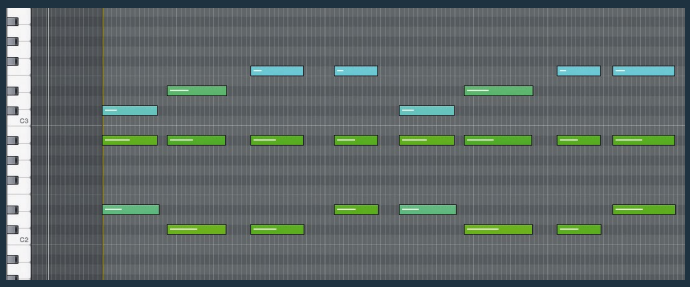
Here are five quick theory ideas to improve your progressions…

TRY A NEW TIME SIGNATURE

46 Would you be disappointed if you were only allowed to write in C minor from now on? Of course you would. The limitations of everything playing back in the same key would start to feel stale. And yet nearly every piece of commercial music you've ever heard is in 4/4. It's a de facto choice for most people; almost always the default choice in every DAW. Break out! Switch the time signature in your project to 3/4 or 12/8 or even 5/4 and see what happens. You'll feel much freer to program innovative beats, for a start.

BORROWED CHORDS

47 Diatonic means 'in key', and diatonic chords are formed using only notes taken from a particular scale. So a C major scale containing the notes C-D-E-F-G-A and B – those are the white notes on a keyboard – would give you the following set of diatonic chords: C, Dm, Em, F, G, Am, and Bdim, formed by stacking alternate notes onto each note within the scale. These are the basic triads you may already be familiar with. However, a palette of only seven chords can be limiting, so why not borrow chords from other keys? Borrowed chords are most often taken from parallel keys, which are keys that have the same root note as the original key. In the case of C major, the parallel minor key is C minor, so this gives us a whole new set of chords to choose from – Cm, Ddim, E^b, Fm, Gm, A^b and B^b.

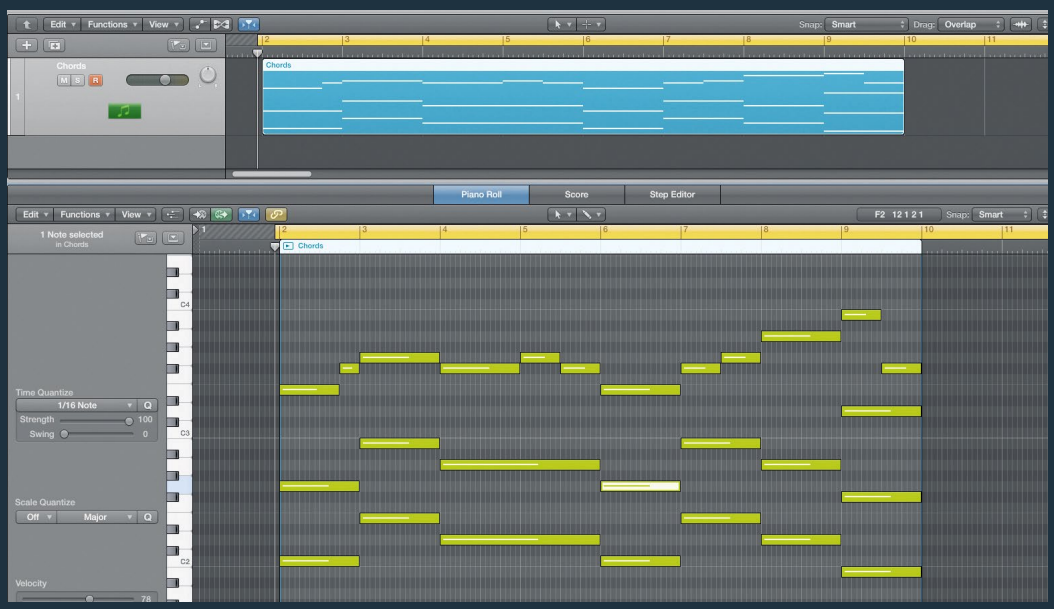


PUSHED CHORDS

48 **There's no doubt that any drums or percussion in your projects will do most to define the 'rhythm' of your tracks but the position of chords and even melodic notes will play a crucial role too. As such, if your chord parts only fall on the down-beats of each bar, you may well find that the overall sense of rhythm your track has is diluted or made predictable. 'Pushing' chords so that they fall a little early or late can make a big difference, by keeping your listeners on their toes. Even a push of 1/8th note either early or late can make a big difference.**

CHORD INVERSIONS

49 Inversions are, put simply, the idea of playing a chord with the notes in the 'wrong order', so instead of playing D major D-$F^{\#}$-A, you could play it A-D-$F^{\#}$, and still maintain the exact same feeling. One way to use inversions to good effect is to have the lowest notes match a bassline below.

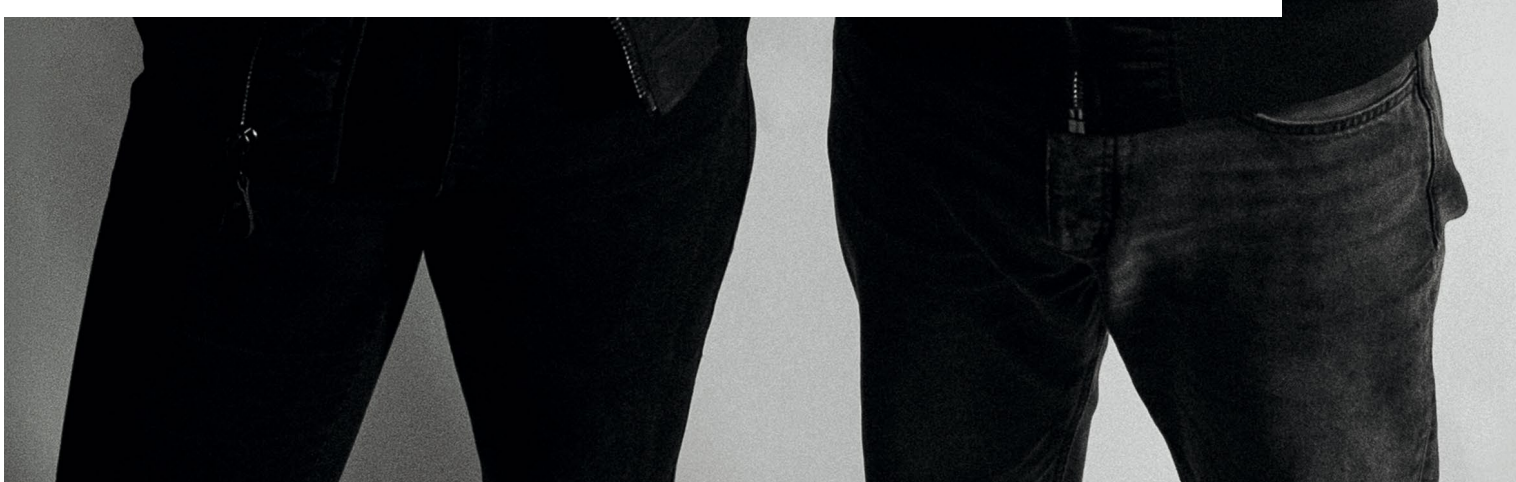


PASSING NOTES

50 **In our desire to make sure we hit the right notes in the right places, we often end up recording 'block chords' where the flow from one note to the next isn't our first priority. That's no problem, particularly if we go back to our recording and take a pair of scissors to it, chopping notes to create melodies and looking for 'passing notes', which help chords blend more sinuously from one to the next. For example, cut holes into the top line of your chord progression and fill in the gaps between note steps, leave a note hanging over from one chord to the next, or add extra notes to enrich your harmony.** FM

MAELSTROM & LOUISAHHH

After a decade of collaboration, techno rock duo Maelstrom & Louisahhh release their debut album. **Danny Turner** finds them at the peak of their powers



Despite having divergent musical upbringings, Joan-Mael Péneau's techno/rave background has merged seamlessly with Louisa Pillot's New York indie-rock past to forge an enduringly successful partnership. Since the release of the duo's debut EP *Translations* in 2013, the twosome have explored numerous gritty excursions into vocal-based techno rock while creating the RAAR label for their own releases and others. After ten years working together, their debut album *Sustained Resistance* is a perfectly timed celebration of their hard-hitting amalgamation of styles and political commentary. The LP marks a new chapter in Maelstrom & Louisahhh's creative growth, with its driving, club-ridden aesthetic scouring the industrial/EBM terrain, amidst vocals riven with polemic outrage and post-pandemic angst.

Tell us a little about your musical backgrounds.

Maelstrom: "For me it was about going to illegal rave parties in the late '90s when I was 16 or 17. After the criminal justice bill, people like Spiral Tribe started coming to Europe from the UK and organising free parties around France. These guys were obviously DJing but some were playing live. They'd bring their equipment onto the dancefloor in front of the sound system and that made it really easy to understand what type of gear they were using and how. At that age, it was like listening to magic."

Louisahhh: "My background is completely different. I played guitar, piano and sang in choirs until my dad took me to see Nine Inch Nails when I was 11 – thanks Dad [*laughs*]! Music was a way for me to understand how to feel comfortable inside my own body and the world around me – I was obsessed with Garbage, NIN and Smashing Pumpkins and started going to clubs in New York. I felt socially awkward but decided to DJ and try to control the energy in the room – it also gave me an excuse not to talk to anybody in a club. My secret dream was to be a front woman in a band, but it felt very scary to live that dream until I started writing and performing vocals on other people's tracks. I didn't have a lot of confidence in my production skills so I started releasing my own music collaboratively, and Mael played a big part in that."

When did you first gain access to gear?

M: "I learned a lot from a magazine in France called *KR home-studio* and there was a music gear shop in my home city of Nantes, so I started talking to them to try to understand the cheapest way to buy my first piece of equipment. At first that was an Akai S20 sampler, which had no sequencer so I had to put all the samples on top of each other, and then a Korg MS-20 semi-modular synth. I later found out about Roland grooveboxes like the MC-303, which was a big deal at the time."

What were you recording onto?

M: "At first I recorded live to cassette tape but then I pooled some money together with a friend and bought a MiniDisc four-track recorder, which was cool because it was digital and editable. I couldn't afford fancy compressors, EQs and delays, so doing it in the box gave me access to a certain level of production that was impossible to attain without spending money on a lot of gear or going into a studio. After a few years I found the workflow was painful and I couldn't find a way to make music in a way that was natural, so I started composing everything using hardware only and recording, editing and mixing tracks in the box."

L: "At the beginning, I felt pretty anxious and stupid around technology – it's only now that I'm getting my production chops in line in a way that enables the music to feel like me. As a woman in a male-dominated industry, especially electronic music, the pressure to show up and be really fucking good was intimidating. I didn't feel I had the discipline to EQ kick drums, learn how to be a good producer or have any patience for that, so I played to my strengths and used my voice and ability to write songs. At first, I was hesitant to be a woman in dance music who was all about shiny disco balls and talking about nothing. If I was going to use lyrics and my voice then it would have to have integrity, even if it was veiled in messages about the dancefloor and body music."

So, when did you guys first meet?

M: "We met ten years ago. Louisahhh had just recorded a track with the French producer Brodinski on his new label, Bromance, but hadn't sold any records yet. I was working with the same management company at the time and they were trying to get her to record her first solo EP. She'd been trying to find a sound that would work but had a hard time finishing tracks or creating something that felt true to her. Brodinski suggested we try working together because he felt we had a lot in common musically, so she showed up at my studio in Nantes – a bit like an exchange student."

From what we understand, you immediately hit it off?

M: "We recorded the EP *Translations* in about three days. Despite having very different backgrounds, we were super-happy with the music and the relationship was so easy and fluid. We met in an area where music has to be political and open new doors as a way to express, not rebellion, but the possibility of being different – and that still shapes the music we're making today."

How do you think your amalgamation of styles has represented you musically? It seems to veer from techno rock into EBM and industrial.

M: "I came from hardcore techno, drum & bass and illegal raves and Louisahhh came from a punk, garage rock and NY indie-electro background. Obviously, we're both big fans of Front 242, Nitzer Ebb and EBM in general, but it's tricky to answer your question because I discovered that scene a bit later in my career so I'm not sure to what extent it has influenced us. Obviously, that music is electronic with vocals and lyrical content, which is not prevalent in underground dance music as a whole, but it made us understand that it's possible to create songs with a meaning and a message on hard, danceable electronic music."

L: "That music definitely has a world view that defines itself as refusing to drink the Kool-Aid or be one of the happy many. After a decade of working together, Mael and I have definitely moved from needing to people-please or be likeable into a space where, because of recent events, the world feels ready to swallow a message that's intentionally disruptive. We call it a benevolent anarchy."

Going a step further, you started the RAAR label. Was it specifically set up for Maelstrom & Louisahhh releases?

M: "We had a vision for it and have released for other artists. The idea was similar to what we were trying to do with our own music in that we felt there was a need for a place for people who didn't belong anywhere to find a home. The way we select music to release is exactly that – it can only be

released on RAAR if there's no place for it elsewhere. Obviously, we have to like it too, but there are still types of music that don't really find their place in the dance music ecosystem and we want to use our careers and exposure to push sounds that are difficult to access for people who go to raves and clubs."

You've been working together for a decade, yet *Sustained Resistance* is your first album. Was the anniversary your sole reason for expanding the project?

L: "It was only after we started retro-planning the record that I suddenly realised it would be released in 2023 and said to Mael, 'oh, it's ten years after I showed up on your doorstep, how sweet!'. We were talking about it yesterday and I got really emotional. Although not romantic obviously, it's the longest intimate and emotional relationship I've had with a collaborator. It felt like this was the right time and the whole process flowed very easily and in a way that felt aligned to the values we share in a way that's really brave and honest."

M: "Recording an album is quite a statement so the decision to do it needed to be taken carefully. We'd been experimenting, researching and going through this dialogue about what exactly our sound was and where we'd go musically if we decided to make ten tracks. The conversation was ever-growing but it wasn't until last winter that we felt that we had arrived at the right moment."

An album gives you licence to be more expansive. Did you want to take advantage of that?

M: "When you release a single or EP it's more of a shout or a small sentence, but when you release an album it's completely different. You can obviously elaborate a narrative but it also makes you think about your creative processes in a different way because not everything has to be a shout or playable at a club at 3am."

Was the more elongated process any different to how you normally work together?

M: "Most often I'll start writing one-minute ideas for a couple of tracks that don't really have a structure but will have a distinct sound or musical idea that's interesting, then I send that to Louisahhh so that she has time to process and write lyrics around them. Generally, she'll record some vocals to see what works and send them over for me to start figuring out how I can integrate them into the track. We finished everything together in my studio in Nantes, going through everything to decide what works and what doesn't, reworking the instrumentals and rerecording vocals so we can glue everything together. It makes sense that we should both have a say in a way that's organic rather than making yes or no decisions remotely."

> "MOST OFTEN I'LL START WRITING ONE-MINUTE IDEAS FOR A COUPLE OF TRACKS THAT DON'T REALLY HAVE A STRUCTURE BUT WILL HAVE A DISTINCT SOUND"

Louisahhh, can you give us some insight into the driving force behind some of the lyrics?

L: "We're talking about the post-Covid landscape that has created a lot of disillusionment. We've touched these places in our music before and you mentioned our sub-cultural industrial/EBM influences, and it feels important to me as a songwriter to make music that speaks to people who might feel like they don't fit in or have a voice in an environment that often pretends to be okay when it definitely isn't. This may sound pretentious, but I feel that the best I can possibly do is be a channel for the work and show up with my knives sharp and ready. The record itself deals a lot with themes of depression and body autonomy – the song *Vixen* is talking about abortion in America and was written the day of the Uvalde shootings in Texas. There are definitely political elements to our work that not only communicate angst and disillusionment but also the ferocious hope that there can be some grace on the other side of that."

The dark ambient track *America* is a little different to the others in its approach…

M: "This track actually had drums on it at first and I started writing those before adding background vocals and some cinematic elements. Then Louisahhh came up with some lyrics that resonated with the current political situation in the US with regards to abortion rights. Once I had those, I realised the drums would no longer work because they would draw too much attention to the groove

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or the beat. A distinctive rhythm has consequences on how your body and brain processes music, so removing the drums opened up a space that could be filled by Louisahhh's voice. The vocals are spoken word somehow, so we decided to process them in the same way we would process the drums, creating different layers that would have an unavoidable presence."

Did you set up a vocal booth in your studio to record Louisahhh's vocals?

M: "Actually, no [*laughs*], we recorded in the same room but I'm lucky that the room does not have much reverb in it. It's just the two of us and I can keep quiet, so we don't really need to find a separate place to record."

"MY CREATIVE PROCESS IS USUALLY DIFFERENT TRACK BY TRACK BUT ALWAYS STARTS WITH ME JAMMING WITH HARDWARE GEAR"

How do you tend to rev yourself up for the vocal performance Louisahhh?

L: "On the early Bromance stuff Mael would have to leave the room – or ideally leave the premises so I could lay down a sultry, sexy little vocal [*laughs*]. Now he sits staring straight

M & L'S CHOICE KIT

Elektron Analog Rytm
"The sequencer on this is very flexible, with enough features to make extremely complex sequences. This is how we wrote most of the drums for the album, even though the drum hits are usually heavily processed before importing them into the Rytm."

Analogue Solutions Telemark
"We love the sound of this. Slightly detuning one oscillator gives us dark basslines that set the tone for a track. It's also very flexible thanks to its patchbay."

Midas Venice F16
"This is not supposed to be an instrument, but we use it by overdriving all kinds of sources through its channels to push the transients and get more character from drums, vocals, synths or samples."

Polyend Medusa
"This is a paraphonic digital and analogue synth but also an incredibly versatile step sequencer where you can lock any parameter of the synth to any step. We used it a lot for textures, sound design, weird drum sounds and alien loops."

UAD soundcard and plugins
"Having access to so many classic hardware pieces in a software environment is a dream – our favourites are the Distressor and 1176."

ahead while I scream at the top of my lungs, so it's funny how the level of our comfort together has improved. A lot of that stems from me working on my voice through a lot of vocal training and live performance."

So due to your familiarity with Mael, you no longer need to psyche yourself up?

L: "Nantes is like a haunted city in Brittany and has lot of docks that used to be ports for slave ships. I'll just go for a walk in freezing Nantes next to this haunted river, listen to the track on loop and come back with a song. In the past, Mael would send over sketches weeks before we'd get in the studio together and I'd show up with stuff I'd written and just record, but this time we did a lot of work in a short period of time. I sometimes wonder whether this will be the last song I might have in my body or will ever write again, so I've started to feel more comfortable with being unprepared. Because we worked faster to perfect and tweak things, that immediacy informed the work in a way that was really satisfying."

Mael, what gear are you using to initiate tracks?

M: "My creative process is usually different track by track but always starts with me jamming with hardware gear. I have lots of Elektron gear like the Elektron Rytm and the Analog Four and they're very handy because they all have incredible little sequencers with crazy possibilities. They allow you to go into so much detail and do so many wild and live things that you can take a different direction in a second. I start with that and then I turn to a few different synthesisers. On this album, mostly the Analogue Solutions Telemark, which is a semi-modular clone of an SEM synth with two oscillators."

Modular gear sounds well-suited to your gritty sound…

M: "I don't use modular too much, I just happen to love the sound of this specific synthesiser. It has a patchbay that allows you to reroute oscillators, LFOs and envelopes to different points, which is handy but because it's already pre-patched you can use it like an SH-101 or Moog by just plugging it into MIDI and playing notes. I'm not really into the modular craze and not a modular sorcerer that uses it for sound design; I prefer to do that with the modulation capabilities that the gear already has rather than building my own machines using smaller blocks. I might use the patchbay to do something specific, like making a kick drum, snare or special SFX, but I'm most often using the Arturia BeatStep's sequencer with CV gate. I just plug the CV out from the sequencer to the CV in on the Telemark and filter the sequencer individually from the pitch, which is cool for creating interesting sequences."

You tend to assign distortion to a lot of the sounds on the record too…

M: "Actually, most of the time it's not distortion I'm just overdriving a drum machine or a synthesiser into a mixer or preamp, pushing the sound and bringing up the transients. That brings out different things depending on how much you're driving it out. For example, if you pitch three tom drums differently and process them, it's going to bring out different harmonies depending on the amount of overdrive you're putting them through. Then, depending on which mixer you use to overdrive those sounds, you're going to get a different kind of colour. I'll try to do that within one channel of my Mackie Mixer and the same thing again on my Midas Venice mixer and play with the EQ to see what kind of impact

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it will have on the distortion I'm getting through overdriving the signal. For most of the tracks on the album, the initial ideas were produced that way."

Does physically overdriving the sound produce a more satisfying effect?

M: "I really love the process of how much control it gives me on the actual signal. Let's say you have a distortion pedal and plug it in, unless you put an EQ before that, which is not very practical, you only have dry/wet buttons to modify the signal and affect the sound. The way we've been doing it in the studio, including on the vocal sometimes, gives you so much more control because there are so many elements that you can change from the amount of signal that goes in. I will also chain the EQ so I can run the signal through both mixers and overdrive one or the other, or both, in different ways. This gives you all sorts of interesting processing points, which makes it more flexible. Of course, I'll also use some distortion plugins and pedals at times, but that's usually a side element – I won't use it for the core of the track because having that precise control is paramount to how I want things to sound and I'm pretty sure people will hear that on the record. It's also fun, which is important too."

You're using Ableton Live for recording?

M: "All the sound production generation is made entirely by hardware machines and then we'll record everything into Ableton as if it were a multi-track recorder. I could use my Venice mixer for the final mixdown but it's so much more convenient to do it within Ableton Live for the simple reason that you can go back to a mix and fix things if you realise after a few weeks that something's not working. UAD plugins are also incredibly good and give you so many options when it comes to using interesting EQs and compressors."

What sort of decisions were you making during the mixing process Louisahhh?

L: "For these album sessions there was an emphasis on not tweaking things too much. A lot of the recordings were one take and the sonic tools we were working with were often very minimal. Mael would distort three kick drums and say these are the only sounds allowed on the song, so there was no fussing, which is ideal because the fussier you get the more potential there is to fuck things up. One of our drummers from the live band does a lot of mixing and he gave us early feedback that we'd never considered on how to make a spacious record where the sounds aren't all in your eyes. He made a lot of good suggestions on how to fill out the sonic landscape, which was really helpful because it made us think about sound in a different way. The feeling of the record in terms of how embodied and physical it sounds was a result of that early feedback."

"MAEL WOULD DISTORT THREE KICK DRUMS AND SAY THESE ARE THE ONLY SOUNDS ALLOWED ON THE SONG, SO THERE WAS NO FUSSING"

You already perform together live, so presumably you'll feel comfortable touring this album together?

M: "That's the whole point. We're planning to tour next spring and have a special project built that we like to call 'hybrid live'. We're bringing drum machines and synthesisers on stage and Louisahhh will be singing so we'll be able to play any track from our back catalogue, but we've also decided to combine CDJs within that live setup so we can DJ tracks, rework them with vocals on-the-go and play a live track here and there and beat match everything."

L: "We want to cultivate a level of presence, intensity and, ideally, a connection to the crowd in the moment. At this point, I feel that's vital. It may need to be renegotiated depending on how it goes [*laughs*], but we may move away from solo DJ sets for this album cycle and exclusively focus on performing together, whether that's 90 minutes of original material or a six-hour, all-night hybrid set with live vocals woven in. At this moment in our relationship, just DJing feels like phoning it in." FM

WANT TO KNOW MORE?

Maelstrom & Louisahhh's new album *Sustained Resistance* is out February 10 on RAAR. For more information, visit **labelraar.bandcamp.com/music**

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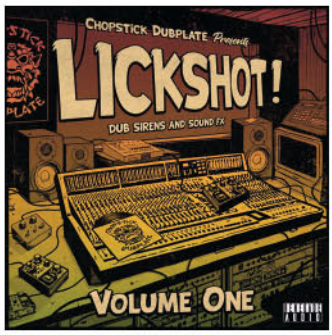

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GOLD PANDA

Derwin Dicker's fourth album finds him exploring mental health and self-care through sample-based electronica. **Matt Mullen** finds out how it was made

Some artists spend their career restlessly experimenting with all kinds of equipment, instruments and gear, taking stylistic detours into new approaches and techniques with every album released. Others discover an affinity for one or two pieces of kit early on, forging an ongoing creative partnership with their tools that goes a long way towards defining their sonic fingerprint. Derwin Dicker, better known as Gold Panda, can firmly be placed in the latter category.

Dicker's worked with the Akai MPC and a turntable pretty much since his first release, *Quitter's Raga*, came out in 2009, chopping up, arranging and manipulating samples into music that sits somewhere in between the fidgety pulse of dance music, the sample-happy, DIY ethos of hip-hop and the glitchy abstraction of minimal electronica. Other instruments and machines have rotated in and out of his setup, but the core of his approach has remained centred on carefully chosen samples, hidden gems discovered in record stores, sliced beyond recognition and given new life in the MPC's circuits.

Even when Dicker's dived into new tools – devising self-built patches in Max, for example – they've ultimately served as a way to explore new dimensions of this beloved sampler, a tool that has shaped his music not only through its unique sound, but through the peculiarities and limitations of its workflow. The MPC's gently saturated tones and the crackle of the vinyl he samples with it are present throughout his discography, lending an emotive warmth and a pang of nostalgia to deeply personal electronic music that's often tinged with an affecting sense of melancholy.

Dicker's fourth album, *The Work*, finds him venturing deeper into emotional territory, exploring the difficult journey towards mental stability he's undertaken as a father. "The work is something that's used in my therapy a lot," he says. "I hear it a lot in self-care and books about mental health – the work on yourself basically." We caught up with Dicker to find out more about how the record was made.

Could you tell us a little about the background to this album?

"In 2018 I went travelling with my then girlfriend – now my wife – who did the photography for *Good Luck And Do Your Best*. I just did stuff on a laptop, basically. I couldn't take my MPC with me, so the laptop became my music notebook. But then I got back into Max/MSP and Pure Data. I love Ableton, but I don't feel very inspired by it as a thing to create music on. I prefer doing it somewhere else. Ableton, I usually use for recording stuff into, basically, from other bits of kit.

"It was just about getting away from… not the MPC sound, but I just needed a fresh start. I did some other stuff under different names. I wasn't really sure where I was gonna go after the last record, I'd had enough of touring. [*laughs*] I was starting over."

What is it you're drawn to about Max and Pure Data?

"They're very similar programmes, because they're both made by the same guy originally. A guy called Miller Puckette. After he'd worked on Max, he made Pure Data as something that he didn't have to monetise, because he couldn't be bothered to do any support or anything. I just

like the way you have a blank screen. When I make music on my MPC, I don't have sounds in a folder, I just start blank every time. That's how I've always made music.

"I like the patching environment in Max. I like how it looks – little wires going everywhere. There's something nice about it. It feels like real computer music to me. That's what I always imagined electronic music was. I was very into the glitch of the early 2000s, and late '90s even. Computer music was always interesting to me. It's quite liberating just having a laptop to make music on. But I think what always put me off working on a laptop was having to use a digital audio workstation, or whatever you want to call it, something that was laid out in that horizontal way, where you move audio around. I didn't find that very inspiring."

Was a lot of the new record produced on the road, on the laptop?

"No. [*laughs*] Basically, I ended up using a patch that I made in Max for the MPC, which does what a lot of modern equipment does now, probability-based stuff where you can allow certain sounds to come through on a sequence a certain amount of times, or whatever. So I made one of those for Max, because the old MPC I use doesn't have that. So the MIDI would go through that Max patch to trigger the drums in something else, and it would have those probability and retrigger-based possibilities from my Max patch.

"So I didn't use Max to generate sound, but I used it as a help patch. I never liked arranging drum patterns, so I thought that if I had a way that I could do it in real time, I could just go back and hear it again and it'd be done, because my patch would decide whether to mute a kick drum or not, randomly. The MIDI comes out of the MPC, through Ableton, then the drums were all in a Rossum Assimil8or, a modular synth thing. The MIDI went through the Max patch."

> "I'LL PLAY RECORDS OVER THE TOP OF WHAT I'VE ALREADY MADE TO TRY AND FIND A SOUND THAT I CAN GET IN TUNE WITH THAT MELODY"

Aside from the randomised drum patch, could you tell us about any other patches you've built?

"I did this other project called Softman, which is on Bandcamp. I think there's one record on Spotify. I didn't tell anyone about it, it was just for me to mess around with Max. So I did one that was like, three or four resamplers. So I would sample something, pitch it around, and then I would resample that and resample it again a few more times. I made some LFOs to retrigger it, and it's just kind of ambient. All the sounds are from records that I have. There's usually just one sound, and they just loop in various phases. It just ended up being quite nice.

"Another one I did was just sine waves through a filter. Another one was kind of a techno experiment for playing live with Max, and I recorded the results. I've made stuff like Euclidean sequencers, and I've been trying to make a patch that I can improvise with, that grabs notes in a certain scale and pitches them around and then sends them to another one. I don't think I've made anything else that I've used as Gold Panda. Apart from some drum sounds; I made some drum sounds in there, and I just resampled those into the MPC."

Did you find it a learning curve getting into Max?

"It's like learning a language. I don't know any other programming languages. It's object-based, which is quite nice. Max and Pure Data, they both have help files on every object, which you can unlock and take apart or copy and paste. It's not easy to learn, but you can see how everything works. The Fors plugins that I use, they're all made in Max, so you can just download the Max patch, open it and see what they've done. I like that about Max."

Sampling has been fundamental to the way you make music in the past. Was that the case on this record?

"It always has been. I just love the sound of vinyl crackle. It's an excuse to buy random records that I don't know anything about. Sometimes when I want to make new music, a good thing to do is spend a day record shopping and finding records. I see the cover, and then I read a bit about it. I have no idea what this is, so I'll buy it. Then I'm just finding bits and bobs on there. I don't want to sample other people's music, as in whole phrases. Because I like glitch, and that whole era of electronic music, I really like those small samples. Which I guess is like micro-sampling, which I hadn't heard of before I started doing music."

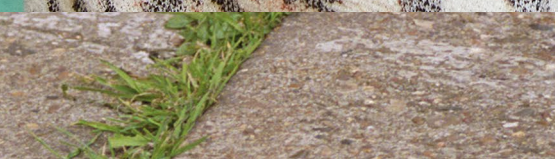
Do you often find that a sample will act as a jumping-off point for a whole track?

"Definitely. If I can get a good loop out of something, pitch it up and down and get a nice melody, then what I'll do is, I'll play records over the top of what I've already made to try and find a sound that I can get in tune with that melody. Then I'll chop that up and pitch that around as well. So yeah, it's just multiple layers of samples, basically, that have been re-pitched and truncated."

And you're still using the MPC for that?

"I was using the 2000XL MPC on *Good Luck And Do Your Best*, but on this record I used the 1000. I tried a new MPC called the Live II, but it's too much like a computer. I like the little screens, I like numbers – I think that's why I like Max and Pure Data. I like the feeling that I'm controlling a flow of information. I don't want to feel like I'm using an iPad. I think with the new MPC, when I turned it on, it said something like 'what genre do you want to make?'. I just turned it off. If it's not broke, I'm not gonna try and fix it.

"The 1000 I think is great. Someone who used to work at Akai released an operating system that made it a million times better. It's just great. I haven't been using it lately, just because there are some limitations with the MPC and when I play live, they get quite frustrating. So I'm not using the MPC for live sets. But I did use it to make the record."



THIS SALE

For live performances, are you recreating the tracks in Ableton Live?

"No, I've got a modular synth tracker called NerdSEQ. It's brilliant. I loved making music on a Game Boy program called LSDJ. There's something about the tracker that makes me make interesting melodies. So I'm doing it the wrong way around. I'm using the tracker to sequence all my sounds, which are in Ableton.

"The problem I have is there isn't much equipment, aside from the MPC, that can do my music live. Because it uses so many samples, and because it's made in the MPC, the way the sequences in the MPC work and the way the samples are pitched around, there aren't many options to do it the same way.

"Also the MPC is quite limited, you can only trigger one MIDI channel at a time. Whatever track you're on, that's the MIDI channel that's been received. I was getting frustrated with that, and there was a limit to the things I could do. So I've basically recreated an MPC in Drum Rack. Drum Rack is basically an MPC. Everything's in there, but the sequences are in the NerdSEQ tracker, just because I love the interface of trackers. It's just something to do live, something different."

You've mentioned before that when you're writing, you try to build arrangements by playing live on the MPC, as opposed to dragging things around in the DAW…

"I make choices on the spot that I wouldn't do in an arrangement. Also, it feels more real to me. If I tried to program a filter doing something, it sounds quite stale and contrived, it sounds forced. And if I record stuff live, it's easier. In this book I've been enjoying – *Microsound* by Curtis Roads – he says something about improvisational music and how the process of writing, arranging and recording music is very long-winded. Because you're doing all these experiments, working out what the sound is, working out what the song is… whereas musicians who improvise just go into the studio, play, record it and it's done. Then they move on to the next thing. It's a very effective way of working, and it's very time efficient.

"The best thing I've bought was another audio interface with more inputs. So I've got eight stereo ins basically. Which means I can just capture everything in real time, and then I just go back and chop up the best bits or get rid of things I didn't like. And that's where the Max patch came in useful, because I didn't have to go, 'oh, should I take the snare out there for those bars?'. It was all done for me. So that came in useful.

"It's something that I picked up from working with Jas from Simian Mobile Disco. We did a record together under the name Selling. I've recorded a few times with him, although we haven't released the other stuff we've done. But what we do is we pick some gear, set it up, and that will be our music, basically. Then we just record until we think the track has enough stuff in it. And then we go back and edit it, so rather than being 11 minutes, we'd get it down to four or five. That worked really well. So I learned that from him, and just applied it to Gold Panda."

> "WE PICK SOME GEAR, SET IT UP, AND THAT WILL BE OUR MUSIC, BASICALLY. THEN WE JUST RECORD UNTIL WE THINK THE TRACK HAS ENOUGH STUFF IN IT"

Which plugins do you use?

"I'm using a couple for live sets, which are by Fors. They're really cheap, and really good, and the interface is very simple. I had the Arturia stuff, which I used with Anoushka Shankar when we did a duet together, and they're fine. But the interface for those is replicating a huge synth, with all these dials and a little screen. I feel like there's too much going on. So I changed to the Fors stuff and it's really simple.

"I use the Toneboosters free stuff. Especially ReelBus. I used to use these effects, I think they were by Destroy FX, but they don't work with the new 64-bit stuff. But I haven't used them for years. There was one called Transverb which was amazing. That's it really. Then I just use what's in Ableton, like Glue Compressor and stuff.

"I mix my music with other people. Luke Abbott mixed this record, so he did it all in Ableton in his bedroom. But it sounds great. I make a final version in my way, and then he just cleans it up. I've got better at knowing what I want my music to sound like. Before it was all just really badly recorded. By separating the channels I've got a better understanding now of where I should put things in the mix. covering the whole spectrum. I like very clicky sounds so I think before, everything was very muddy. I think that came from not knowing anything about making music. I didn't know anything about dance music."

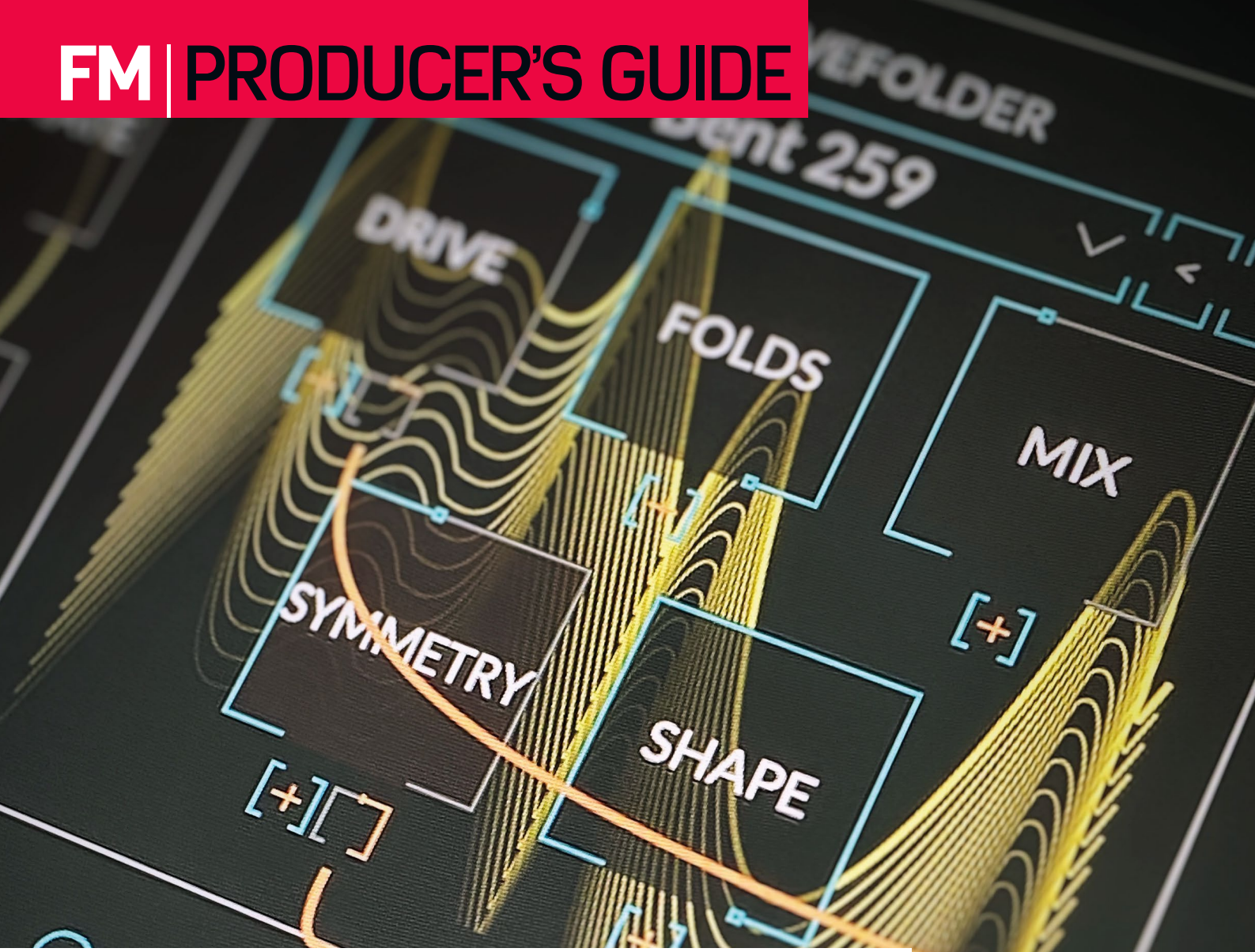
When we last spoke to you, you had a few hardware synths knocking about. Are you still using those?

"I sold the SH-101 and I sold my 808. I basically hadn't done gigs for ages, and I ran out of money. So I thought, well, I'll just sell this stuff, and maybe if I get some money in the future I'll buy it back. I ended up using a Nord Rack 3, which is basically just a Nord Lead 3, but the rack version. It's amazing, the interface on it is amazing. It has a little light on each dial basically, and when you recall a patch, it just comes up with where your knobs are rather than having to find where it was on the last one. It sounds great.

"Because I'm not a synth person, I don't really understand what people are talking about when they say, 'this analogue synth sounds amazing'. Especially modern stuff now, I just want to be able to save everything. I can't be bothered to have something that I have to maintain. I just want to turn it on and for it to work. The Nord, I thought, really complemented what I was doing with samples. I'm not a synth person. I want a digital synth that's super interesting, super easy to use, and can save all my patches." FM

WANT TO KNOW MORE?

Gold Panda's new album, *The Work*, is out now on City Slang



Cutting-edge plugin tools

Get to know the past year's most forward-thinking plugins with this tour of the state of the art

Many of us have been witnesses to a golden age of music technology, one in which digital music tools have come of age, developed their personalities, honed their craft, and become stone-cold masters of audio jiu-jitsu. In the last decade or two, digital tools have gone from barely passable, to completely viable, to indispensable and widely adopted. So where now for music software?

We still live in a time where a lot pof plugin tools aim to emulate the workings of vintage gear: analogue circuit components, amp sims and vintage reverbs. While the technology of these are sophisticated enough to make a time-travelling '70s mixing engineer fall to their knees, the tools would still have been familiar for the most part. This issue we're looking in the other direction: at the tools that look toward the future of audio.

What will be the next Melodyne or Auto-Tune? Which bold new tools will become indispensable? What software releases will change the face of music and inspire whole new genres? Well, we can't tell you… but we can give you a feel for the cutting edge of today's digital technology by highlighting a few of the most interesting virtual devices to appear in recent months. Ready to see the world of tomorrow? Buckle in and prepare for countdown…

Waves Harmony

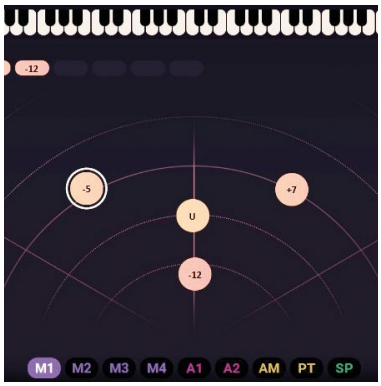
Since Waves hit the scene back in 1992, they've earned a place at the head of the audio software table with an expansive, ever-changing line of signal processing tools. Regardless of which bag of music production tricks you wish to rummage through, Waves have no shortage of options. Mixing and mastering, noise reduction and restoration, sound design, plugins for live sound – all corners of the audio world are covered, and in exhaustive fashion.

One of the areas in which Waves specialise is vocal plugins, having released a plethora of premium tools that handle tuning, de-essing, double-tracking, creative vocal effects and more. Their latest arrival at the party is Harmony, a "real-time vocal playground" that creates instantaneous harmonies and chords from solo vocals. Complex vocal harmonies can be gorgeous to listen to, and are usually the preserve of virtuoso musician types like Jacob Collier and Bon Iver, but Harmony aims to make things a little easier for the blue collar producers among us.

> COMPLEX HARMONIES CAN BE GORGEOUS TO LISTEN TO, AND ARE USUALLY THE PRESERVE OF VIRTUOSO MUSICIANS

The plugin can generate up to eight additional voices from a sound source, with adjustable pitch, formant, panning, delay, filtering and modulation for each voice. This means you can employ Harmony for natural-sounding harmonies or push out the boat for some creative voicings and epic vocal stacks. And, the best thing about it is that all of this can be performed live in real time, in the studio or on stage.

1 Once Harmony has been added to a solo vocal track, the plugin will automatically process the audio, which is why you'll hear it pitch correcting. You can select the Key and Scale, and choose from three pitch correction modes: Natural, Hard and Notes.



2 We don't want to just use Harmony as a tuning tool – harmonies are what we're after, and there are three ways of getting them. You can auto generate notes, play them in using your MIDI keyboard, or click anywhere on the GUI to add a harmony.

3 Drag notes around to position them in the stereo field and affect their level. With a note selected, you can transpose it across 48 semitones using the Pitch knob. Flat drops the pitch to a given note, while the treble clef button corrects it to your scale.

4 If your harmonies are too bright, roll off some of the top end with the Filter, which you can set to low-, high- or band-pass. The Delay slider will offset the harmony against the solo vocal in milliseconds, and is further controlled with Feedback.

5 The Global button offers an extra set of controls to affect all the harmonies. There's pitch and formant offset, Glide and stereo image spread. You can also affect the balance of the source sound and harmonies if you want more of one.

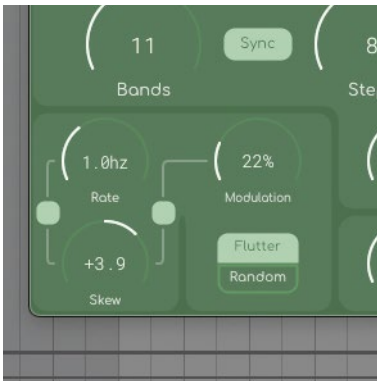
6 For complex arrangements, you can capture snapshots of different harmony setups and automate them as you move through a song. Modulation options are available in the form of an LFO and a Sequencer, assignable by drag and drop.

Multiband delay with Lese Strum

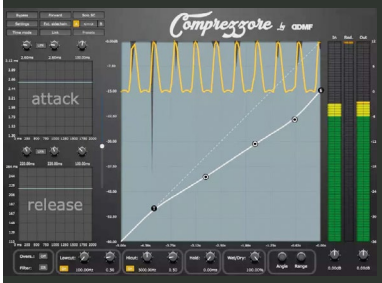
1 Strum is a neat little multiband delay which grants you deep control over up to 15 bands of your audio signal. You can set the number of bands using the Bands dial; higher values will sound smoother but be more CPU intensive.

2 Adjust the delay time according to frequency by dragging the red node, and set the max time using the delay dial. In Free mode delay time is measured in milliseconds. In sync mode, the dial sets the maximum number of delay repeats.

3 Click the blue feedback button to adjust your signal's feedback level according to its frequency using the blue node. You can toggle low- and high-shelf factor bands and adjust the frequency, amplitude and bandwidth with the parameters to the right.



4 Add modulation and adjust speed with the Modulation/Rate dials. Skew adds or subtracts bias from the other modulation parameters. The modulation's flutter mode shape resembles a sine wave, while Random mode adds jitter.

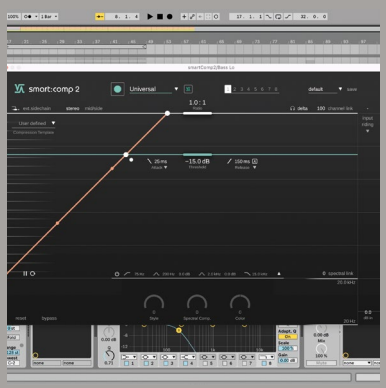


Compression forefronts

The compressor is a strange tool to consider. On the one hand, its remit – grappling automatically with audio levels – is a pretty simple one. But once you consider how much potential this process has for imbuing sounds with personality, power and character, you start to realise there's a certain magic to compression. This magic is actually driving a lot of how we make music.

Innovations in compression in recent years have included more tailored sidechain functionality: Pulsar 1178, for example, with its full sidechain EQ and even delay. And then attack and release timing have started to crop up (as in smart:comp 2). Variable responses à la DDMF's Comprezzore have also been developed, and the subject of spectral compression looms large here as well. We certainly don't seem stuck for new fronts to explore in the compression landscape.

AI compression with smart:comp 2



1 Sonible's smart:comp 2 has been praised for its intuitive design and ultra-clean 2000-band compression. However, as with most Sonible products, the most exciting feature is the AI that can give a good approximation of compression in seconds.

2 By clicking record at the top and playing your track, smart:comp 2 'listens' to your track. After a few seconds the plugin provides what it deems the best universal compression settings. It aims for ultra clean compression, with not too much character.

3 Finally, select a compression model. Open the dropdown next to record for 31 compress models in categories such as Drums, Guitar and Keys. smart:comp 2 doesn't need to listen to your track again so you can audition these seamlessly.

GS DSP Magic Blur

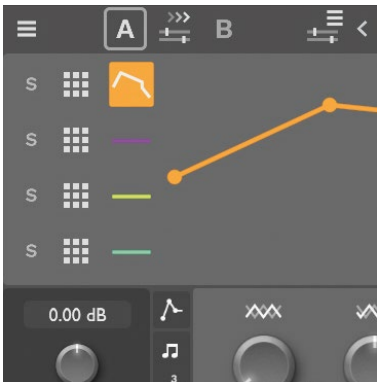
As technology's power grows, so does its ability to process audio in new and exciting ways. Spectral processing is one of many relatively modern audio processing techniques that has been made possible by recent leaps and progress in computing power. The FFT-based technology can take many shapes, from EQs and audio restoration to reverbs and delays. Ultimately, it works by breaking down audio into tiny frequency bands which can then be individually targeted and treated. Although the process has been around for a while, it's only recently that consumer technology has been able to work with audio on a spectral level due to the CPU-heavy nature of the task.

Now, though, there are a growing number of software developers with practical audio applications for the technology. One such company is Gustav Scholda Digital Signal Processing. The Austria-based company specialises in spectral processing, with a catalogue of five plugins that harness the power of this audio treatment approach. The range of products and their various purposes go some way to demonstrating the versatility of spectral processing, from clinical utilities to extreme creative sound design plugins.

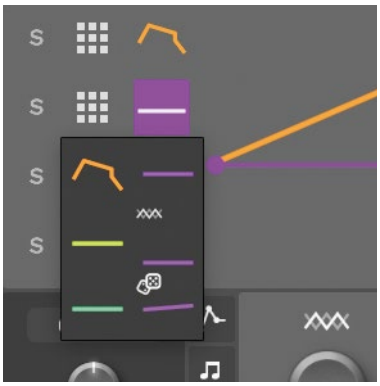
GS DSP's capable spectral processing engine promises to offer innovative and practical approaches to carrying out common music production tasks including EQ, delay and pitch and frequency shifting.

> IT'S ONLY RECENTLY THAT CONSUMER TECHNOLOGY HAS BEEN ABLE TO WORK WITH AUDIO ON A SPECTRAL LEVEL

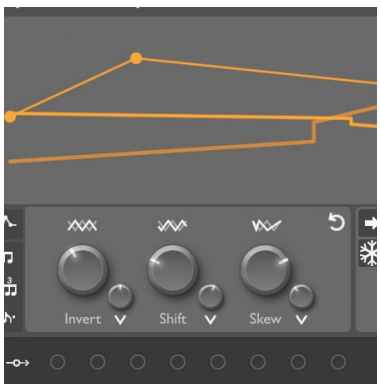
1 MagicBlur is a spectral blur and freeze effect, capable of creating an array of tones. The curve editor displays blur time as a function of frequency; the X axis represents frequency and the Y axis time. Select a curve by clicking on a horizontal line.



2 Drag the nodes to move the curve, or double-click to create/delete nodes. Toggle between stepped curves and free curves by clicking on the top icon to the right of the input dial. For finer frequency adjustment, click the button below that.



3 There are four selectable curves which you can alter independently, or select a curve preset by clicking on the grid icon. Once you have created your curves, you can morph between them using the XY controller to create seamless shifting in the effect.



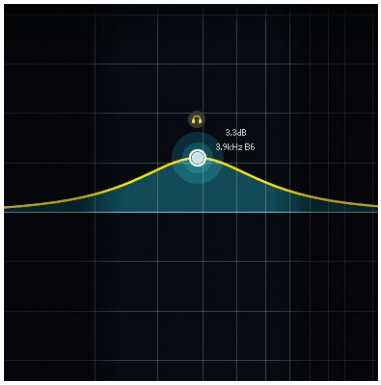
4 MagicBlur's Invert, Shift and Skew dials let you manipulate the frequency and time your curve is affecting. You can set an offset between the left and right channels using the V dials below each of these controls, which creates a stereo spread effect.

5 Add modulation by clicking on a grey circle below the Invert dial, then click on the triple arrow icon to select a destination. Modulatable settings are greyed out with yellow markers; simply click on a setting to assign the modulation to it.

6 There are 12 modulation sources, including custom LFOs, pitch followers and a camera input. Click on the dropdown to the right of LFO to select one. You can mix and match up to eight different types for unpredictable evolving effects.

Getting real with Kirchhoff EQ

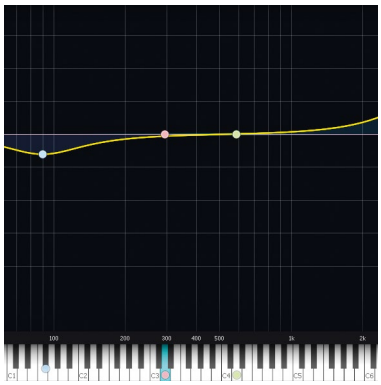
1 Three-Body Tech's Kirchhoff EQ is a 32-band parametric EQ, with nine vintage models, dynamic processing and a feature list that puts many more established EQ plugins to shame. At first glance, it resembles other EQs you may have used, but the power of this plugin is tucked away under the hood.



2 Double-click anywhere on the spectrum window to create a new band, which you can then drag to adjust its frequency and gain. Hold Command/CMD and drag to adjust a band's Q value, or hold Shift to make finer adjustments. Hold the headphone icon to solo an individual band.

3 Select a band to view its control panel. Here, you can change more advanced parameters, such as panning, stereo type, filter type and continuously variable slope. Alternatively, you can right-click on a band's node to access these settings, plus much more.

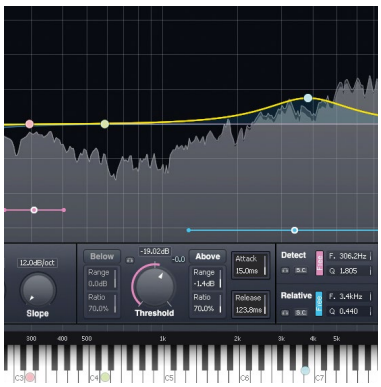
4 Kirchhoff has 15 distinct filter types, including nine vintage models that emulate some of the most desirable classic EQs including Neve, SSL and Pultec. There are high and low passes, shelf and bell shapes, plus sword and brick wall cuts for precisely carving out very specific frequencies.



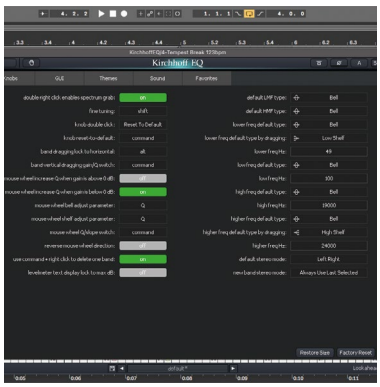
5 You can view the keyboard by clicking on the keyboard icon at the top left of the GUI. All bands will be displayed on the keyboard in the relevant colour, and you can add new bands by double-clicking on the respective note.

6 To access Kirchhoff's dynamic functionality, click on the D icon in a selected band's control panel. The Below and Above parameters dictate how the EQ responds to signals quieter and louder than the threshold. You can turn off the Below or Above action by clicking on the relevant title box.

7 In Detect mode, the dynamics will be controlled according to the signal within that specific band. In Relative mode, dynamics are controlled by the entire audio signal, allowing for a more cohesive and balanced overall signal. You can solo each of these envelope detection modes to listen to what each is doing.



8 Using Kirchhoff's Free dynamics mode, you can manually configure a band's dynamic processor to respond to any frequency across the spectrum. Switch on Free in Detect or Relative mode, then drag the central node of the corresponding horizontal sliders. Drag the outside nodes to adjust bandwidth.



9 Kirchhoff is an extremely comprehensive EQ with a huge arsenal of features. To make its usability as streamlined as possible, you'll find a wide range of customisation options in the settings menu. You can set default filter behaviours, adjustment speeds, filter colours and favourite filters.

THREE OF THE BEST

Minimal Audio MorphEQ $49

1 The mighty, morphing EQ is all about modulation, taking its filter bands on rhythmic, programmable journeys and bringing the EQ to producers' consciousness as not just a mixing tool but a full-on creative effect – especially thanks to its series/parallel configuration options.

minimal.audio

Modalics Beat Scholar $99

2 Circles divided into different numbers of parts help you get your head around rhythms in this plugin. Craft yourself some cyclical, divisible beats with the help of Beat Scholar's intuitive main window, and get yourself in the mood for pizza at the same time! Jokes aside, Beat Scholar is a compelling and interesting take on drums.

modalics.com

iZotope Neutron 4 $399

3 The AI-assisted mixing package has recently been boosted for version 4, and it was already pretty darn useful before that anyway! A high-quality plugin that can go as deep as you want, or simply provide you with quick results that are 95% of the way there

izotope.com

Where next for synthesis?

On the one hand, synthesis has forefronts in many areas of digital technology, but from another perspective, things can look a little unchanging. Even today's most interesting and innovative synths operate under a basic guiding principle: take a source sound (or multiple), and then process that in a variety of ways. Really, the innovation in synths must come from one of these two areas: either in development of a better or never heard before sound generation, or in more interesting, unique or exploratory ways of sculpting or enhancing that signal. Synths like Newfangled Audio's Generate or Physical Audio Preparation take their inspiration from real-world phenomena abstracted into a usable, programmable and, ultimately, lovable instrument.

So where next for synthesis? We can't tell you exactly, but we're itching to find out. FM

Physical modelling synthesis needs Preparation

1 Physical Audio's Preparation is a physical modelling synth that uses mathematical modelling to emulate the sound of two core sources, strings and rattle. It shows a visualisation of the modelling at the top of the GUI, displaying the two strings or bars and the rattle.

2 There are attack/release controls to the right plus a tailboost control which increases gain over several seconds. Below you can select the string setup or rattle control. The string setup gives you independent controls of the top and bottom strings.

3 In string mode, with rattle off and inharmonics and nonlinearity turned down, the output is a traditional string sound. Tweak parameters to create more complex, resonant tones. Settings are note-on and take effect at the next note-on event.

4 Switch the rattle on and in the rattle control page adjust the top and bottom rattle properties for more advanced sound design. Assign velocity modulation using the slider to the left of each parameter. EQ, drive and reverb let you finalise your signal.

All images © Jenia Filatova

KATE NV

Embracing the polarities of abstract and popular music, **Danny Turner** chats to Kate NV about her idiosyncratic approach to sound

Kate Shilonosova emerged from the Russian indie music scene with the rock band Glintshake in 2012. However, as the solo artist Kate NV, her production style is unmistakably unique – as demonstrated on her goofy but enchanting debut album *Binasu* (2016) where Shilonosova mined her childhood to revisit the influence of '80s Japanese pop, obscure children's films and anime.

Further albums such as *Room For The Moon* offered renewed insight into Shilonosova's unconventional approach to production. Playfully coalescing found sounds, chopped-up acoustic instruments and vocal samples, her forthcoming album *Wow* invites the listener to re-evaluate their perception of modern electronic pop once more.

You started as a vocalist/guitarist in the band Glintshake and are still in that band. Do you see it as a vehicle for your political views, whereas Kate NV is more abstract?

"For people who don't make music, it's easier to believe that the motives for making rock music are political but I believe that everything is political even for a person who makes ambient music. It's really about self-reflection and your reaction to the context that surrounds you. Glintshake is a band with four people with very different characters and the way we communicate and make music is different to how I make my own, but it doesn't mean that I'm out of touch with reality. Take, for example, the painter Barnett Newman who was trying to figure out how to exist and create art after WW2. He made the painting Who's Afraid of Red, Yellow and Blue, but there are no strokes so you can't even tell if it was painted by a brush. That was his way to elaborate his reality and everybody's approach is different."

You've mentioned the word 'fairytale' in relation to your own music. Is that to do with wanting to return to the safety and innocence of childhood?

"Yes, for sure. I can't make music when I'm stressed out or experiencing high levels of anxiety. I have to live through what is happening to me and try to turn it into music, which means finding a way for my thoughts to perceive reality and communicate them in an ironic or absurd way. Glintshake's music is very sarcastic, but Kate NV is very self-reflective and intimate. On the previous record, *Room For The Moon*, I was feeling really lonely and felt I had no friends at all. It was my way of sending a message to the world and trying to find some friends, although that may sound very selfish."

When you say lonely, was that due to the pandemic?

"No, because all of my recent releases were finished before the pandemic and even now I have a lot of tracks that I'd love to

finish to create a new pop record but can't because most of the time I feel horrible and very lost. Everything is so unpredictable that I cannot plan ahead because I am not grounded and almost all of my friends left my country."

Glintshake is a punk band but Kate NV is very electronic. When did you switch to create this more electronic style?

"It's interesting that you think Kate NV is electronic music. People call it electronic because I use synthesisers I guess, but lots of bands who are just named 'pop' use synths alongside lots of guitars, bass and drums. On *Room For The Moon*, although the drums are not real, the bass was played by my friend and so were the guitar, saxophone and marimba. I always wanted to be in a band like Tears for Fears playing everything completely live – I just happen to be doing everything alone, but I did manage to perform the record with a band of eight people without any playback a few times. Don't get me wrong, I do like electronic music a lot. My weird ADHD brain is very hectic and chaotic and I'm really interested in listening to lots of stuff simultaneously. On the way back to the hotel today I was listening to LFO, Aphex Twin and Mariah Carey's *All I Want For Christmas Is You*. They go very well together, but for other people that probably sounds a bit crazy."

Do you think people can be a little snobbish about pop music?

"I have no problem listening to Stockhausen followed by Christina Aguilera. Being snobbish about stuff closes a lot of doors, yet being open to music is the key to being open-minded. People sometimes think it's really hard to listen to contemporary classical or academic music, but the only preparation you need is to open your mind and heart and just let the music happen."

You also appear to be influenced by Japanese culture?

"My debut album *Binasu* was influenced a lot by Japanese music from the '80s era and my latest album, *Wow*, is super-influenced by the early 2000s. Both albums and *Room For The Moon* represent different levels of the journey I've taken throughout my childhood. I grew up in the Republic of Tatarstan. I'm not Tatar – my roots come from Finland because my dad's family are from the northern part of Russia, but traditional Tatar music is based on the pentatonic scale. I studied that at music school so it had a great impact on me as a child, but my love of Japanese music also comes from the '90s when Russia had a lot of freedom to explore all the toys and crazy cartoons that were imported from China and Japan. When I was seven years old I saw *Sailor Moon* on the TV and was really inspired by that and we had a lot of pirate VHS tapes coming into Russia from the black market. My dad bought a VHS player when I was two and got a cassette tape with some anime on it – I'm still searching for that stuff!"

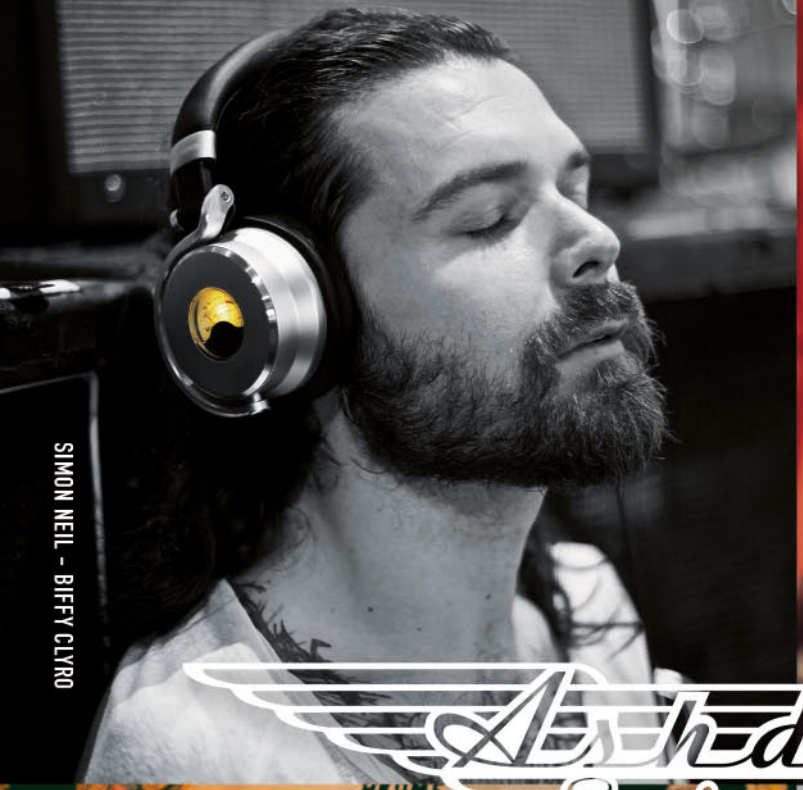
"I HAVE NO PROBLEM LISTENING TO STOCKHAUSEN FOLLOWED BY CHRISTINA AGUILERA. BEING SNOBBISH ABOUT STUFF CLOSES A LOT OF DOORS"

Your music sounds complex but at the same time very emotion-driven?

"I'm self-diagnosed with ADHD and I'm also quite emotional [*laughs*]. It's really hard for me to read a book because I constantly lose my train of thought – I'll either read one page over and over or if I'm hyper-fixated I can read a whole book in one evening. Music is my basic hyper-obsession. It's hard for me to arrive at the moment where I sit down to make it, but once I'm there it's very hard to stop – I often forget to eat, drink or go to the bathroom. I'm very lucky to understand what my hyper-fixation is because it means that I don't blame myself when I'm being lazy or procrastinating a lot."

Your upcoming album, *Wow*, comes hot on the heels of your fourth album *Bouquet* earlier this year…

"*Wow* is a compilation of tracks, some of which are six years old. I don't normally listen to my own music but had to because I've been remixing the tracks for mastering and it's amazing to me that it still sounds fresh or that I have an emotional attachment to it. My only concern about releasing it now is that the album is joyful but what I'm experiencing is not joyful at all. I was afraid that people would question how I could create this light-hearted and fun music right now, but life is very short and I just want it to be out there. Maybe it can help someone else to feel light, warm and happy again."



SIMON NEIL - BIFFY CLYRO

ZAK STARKEY - THE WHO

Ashdown Engineering

METERS

IAN MATHEWS - KASABIAN

SHAVO ODADJIAN - SYSTEM OF A DOWN

MUSIC THE WAY THE ARTIST INTENDED

OV-1-B-CONNECT

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Would you say that you tend to create a library of sounds and use those as a template for each project, or is it more that you are constantly creating new sounds as you're working?

"I wish I was constantly creating new sounds. I don't like to let the music control me and I'm not trying to force something to happen so I never know whether the music I make is going to be a track or a song. I just do stuff, listen a lot and then dive into the project and try to figure out what the music is telling me. Sometimes it tells me this is definitely a track and I need to add a voice or sometimes I'll just leave the music and return to it a couple of years later and finish it as a different person."

So you're basically always working on multiple tracks at any given time?

"It's like I had two baskets, one of them is full of songs and another is full of tracks and I didn't want to combine them into one record as I did with *Binasu*. An album is like a house where you put everything under one roof if it has the same vibe. For me, *Room For The Moon* was a song-based record and *Wow* is a tracks record where all the music has a similar vibe and is based on lots of samples."

Where do those samples come from?

"I thought it would be amazing to record acoustic instruments, so I recorded some marimba and that's how the track *Mi (We)* was born. The original idea was to create more tracks like that but in the end I just let the music happen without trying to follow my original plan. It's definitely a very electronic-sounding record; some people have compared the track *Early Bird* to an 8-bit game soundtrack, but again there are plenty of recorded acoustic sounds like clarinet, saxophone, flute, violin, drums, piano and voices. It warms my heart that I recorded the tracks using samples but the sounds have a connection to real people as my friends played all those instruments."

We also read that you use a sample pack called Broken Orchestra?

"I'm a huge fan of the Broken Orchestra sample pack created by my friends from Found Sound Nation. I used it on the track *Plans* where I chopped up the solo sax part like crazy. I was so happy when I finished the solo because it sounded like a real human performing saxophone. Someone commented, why don't I just hire a person to perform saxophone? But chopping up samples to create something weird is a fun game

"PEOPLE THINK I'M A PERFECTIONIST... I DO LOVE DETAIL BUT I ALSO LOVE IMPERFECTION BECAUSE IT TELLS A STORY AND ADDS CHARACTER"

to me and making music is about having fun. It also adds randomness and improvising is always about randomness."

Are you able to chop up samples and recreate sounds in a way that is intuitive or is it a very detailed process?

"I like to use fishing or making a bouquet as a metaphor for improvisation. When you go fishing, you go to the river, sit there and wait for the fish to come, but sometimes there are no fish. And sometimes you go to a field and there are no flowers. When you improvise to create a track, you combine all the sounds that you have and somehow try to make them work together."

Does that mean embracing imperfections?

"Sometimes people will think the flowers are ugly but when you combine them with others to create a bouquet it just works. It's funny because people think I'm a perfectionist, but if I was I'd probably never finish a track. I do love detail but I also love imperfection because it tells a story and adds character. Like any other producer, sometimes I'll do some editing to clean up a sound but the most important thing is to be honest in the moment of creation. If your music reflects your mind and heart when you created it, then it's sincere and beautiful even if it may sound weird to some people's ears."

In that moment of creation, is it important for you to work quickly?

"If there is a wall between myself and the creative process I might lose the vibe, so yes it's very important to make music as fast as possible. I use Ableton Live because it's very user-friendly and you can start recording as soon as you launch it. I'm often switching between synth patches, playing and recording and I'm constantly creating new projects. I was once asked if I start to hate tracks that I've been working on for too long and my answer was no because I'm always jumping from one track to another. That way I never get bored or stuck, but I guess that's to do with my ADHD."

Do you therefore see mixing as a routine?

"The routine of mixing can be really boring but exciting at the same time. It reminds me of cleaning or tidying up a room – you have a lot of objects that you want to place somewhere so everything will look just how you like it."

Do you use hardware synths or physical samplers to create or play with sounds?

"*Wow* was recorded such a long time ago that I remember what I used but not how it was made. There was definitely a Prophet synth because I recorded one when I was in Red Bull Music Studios in New York. They also had a Sequential OB-6, which is a nice synthesiser with 1,000 patches and I went through all of them. I also used one of my favourite synths, the Alpha Juno-2, which sounds amazing, and I definitely used a Novation Ultranova because it's the first synth I ever bought and I'd just got it when I started some of the tracks. I didn't use any drum machines or samplers because I already have a lot of drum machine samples on my laptop based on live recordings."

A few tracks seem to incorporate a lot of broken-up vocal samples…

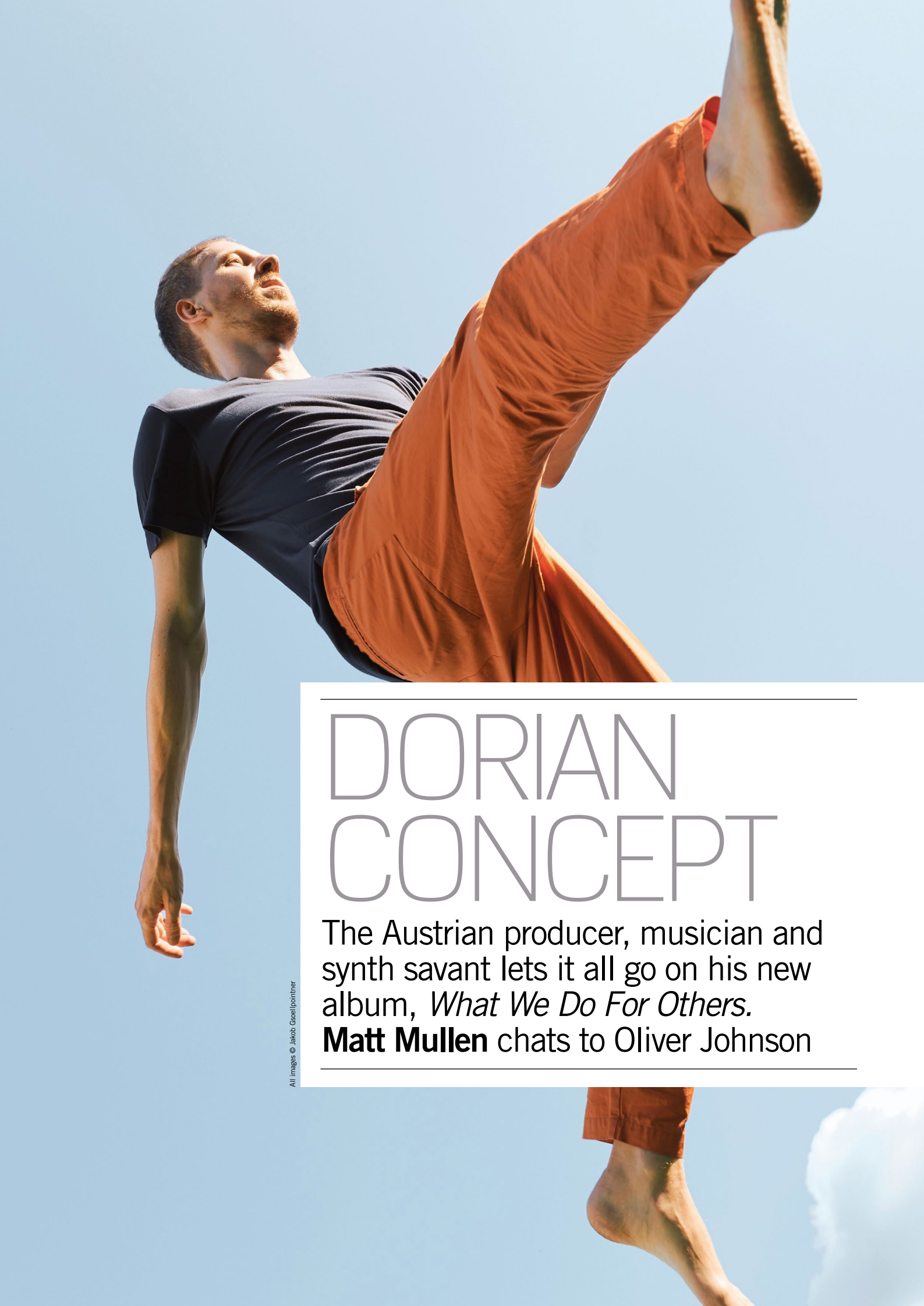
"The vocals on tracks *Razmishlenie (Thinking)*, *Slon (Elephant)*, *Mi (We)* and *Oni (They)* are a combination of my voice and my ex-boyfriend's who happens to be a guitar player in the band Glintshake. I love that all these tracks have these voices because it means that they have a thread running through them. If I'm feeling lazy, I'll put a long audio file on a track in Ableton and chop it up, but if I want to do it properly I'll chop the sounds into short syllables, export them as a separate file and assign them to my laptop keyboard – then I can use them in any way I like. My favourite plugins are from Soundtoys' EchoBoy, which is one of the best plugins ever made."

Can you envision returning to the live stage and improvising with various physical objects?

"I had a plan to try to perform *Wow* live and wanted to practise doing some crazy, random high BPM stuff with a band, but as everyone has moved to different places I need to figure out how to perform alone. Of course, I want to improvise with random objects but I can't carry a lot of heavy stuff with me. Maybe I can figure out how to improvise with objects I find in the places I travel to – that can also be fun!" FM

WANT TO KNOW MORE?

Kate NV's forthcoming album *Wow* is released on 3 March on RVNG Intl. For more information, visit **katenv.bandcamp.com**



DORIAN CONCEPT

The Austrian producer, musician and synth savant lets it all go on his new album, *What We Do For Others.* **Matt Mullen** chats to Oliver Johnson

All images © Jakob Gsoell/pointner

On the lead single from Dorian Concept's new record, *What We Do For Others*, the lyrics are mostly inaudible, vocals warped beyond recognition into an alien choir of pitchshifted yelps and howls. The one phrase we can make out, though – just about recognisable within the freewheeling carnival of synths and drums – is the insistent imperative of the song's title: "let it all go". This lyric seems to serve as a guiding philosophy for the project, which saw Austrian electronic musician and synth savant Oliver Johnson wilfully abandoning the impulse to deliberate over every detail of his productions in pursuit of an elusive perfection. Instead, he chose to embrace the magic of the first take, channelling the initial outpouring of creative energy and excitement that often accompanies the birth of an idea into a fearless thread of spontaneity that runs through the entire album.

"I've always had this drive to do things 'properly' – to somehow strive for perfection," Oliver explains. "But this is an album about me letting go of that urge – about understanding that there's something magical that happens in these first takes we often call drafts. A spirit is captured, and once you try to re-record it, the essence of the idea gets lost. So in a way I wanted to see how little 'control' I could exert on the music whilst recording it – to almost let the music make itself."

As a result, *What We Do For Others* has a joyfully improvisatory spirit at its heart, one that recalls the jaw-dropping one-take synth jam videos Johnson has been known to share on social media.

We caught up with Dorian Concept following the release of *What We Do For Others* to find out more about how the album was made and his unique relationships with the instruments used to create it.

Could you tell us about the background to this project?

"When I look at my albums, the first one I released was 2009, and *Joined Ends* was 2014. The last one was 2018, and for this one, we're in 2022. So there's always a pretty big gap between them. Part of it is due to the label, or delays in pressing vinyl, or waiting to get a feature. But it's also the creative process, departing from previous projects and getting into a new space for a new record. It naturally takes time to get in a new headspace.

"With this one, it felt more like getting out of a dead end, of sorts. The last record was very technical, very densely layered. A lot of variation, micro-editing, very detail-heavy work. A very kind of 'flexing' record, when I look back. But also joyous. There's so many music genres where the technical aspect can become so dominant – fusion jazz, or technical metal, or even '90s IDM – but with this album, I wanted to liberate myself a bit from this thinking and start anew."

You've mentioned that you wanted to let go of the perpetual grasp for perfection and embrace the magic of a first draft or first take.

"Exactly. For me, it took so much courage. It might feel like a simple thing, as you're basically making your process a lot easier when you're taking the first thing and sticking with it. But for me, especially with this perfectionist approach that I was so accustomed to, it took double the courage to do that. To see purpose in the stuff that happens in these first takes, and to be aware that you're sometimes working away from the purity of an idea by perpetually changing things.

"A big part of it was to create a certain setup, or a setting of sorts where I knew I felt comfortable to let go and find these little magic moments. And in my case, it was about defining a certain instrumentation or a certain group of gear. Almost like you're trying to get the band together. But in this instance, it was certain instruments and certain synthesisers that always felt responsible for certain roles. Like the Moog Prodigy, for example, always was the bass player. And the SH-101 always felt like the lead woodwind or brass player. So I went into it with this kind of 'session' approach."

Could you talk us through one or two pieces of equipment that were central to the making of the new record?

"A friend of mine, Marco Passarani – one half of Tiger & Woods and an amazing producer – showed me this YouTube video of an old Roland sampler from the year 2000, the VP-9000. It's a sampler, pitchshifter, timestretcher… it's a unit that got lost in between the era of beautiful retro stuff, and all of the soft synths and plugins we have now. I heard they used it on that Boards of Canada song, *In A Beautiful Place Out In The Country*, for those trippy vocal effects.

"I've always been into pitchshifters and timestretchers, and in my last project, I've always used those for vocals as well. On this album, though, I pitchshifted entire tracks. This does a lot to the actual masters – a friend of mine thought I was crazy! The VP-9000 fascinated me, and it's something I used for a lot of the vocal stuff on this album.

"The SH-101 also had a really dominant role. It's a very melodic album, and I haven't really used any polyphonic synthesisers. I was thinking more in the sense of orchestration, by just using a lot of mono lines to layer things into harmonies, rather than just playing a chord straight away. A lot of the short, percussive, plucky sounds that have a pretty full range, they're all the SH-101, just stacked in seven or eight layers."

We were planning on asking you about the vocal processing. Was that all from the VP-9000?

"Exactly, the Roland. Another thing that I just love doing was recording the vocals in weird ways, with these little tricks. Sometimes I'll pitchshift the entire track by five semitones, or I'll try to replicate a baritone bass singer and try to sing as deep as I could, but then pitch it up again. There are all these little kind of gimmicks and methods where you can make yourself sound like a kids choir, or more androgynous. The idea I had was the multiplicity of inner voices, the different kinds of personalities we all have inside of us, and the idea that each one has their own little voice."

You've said before that your pathway into a new album often begins with one defining track, which the others are built around. Which track was central to *What We Do For Others*?

"It was a song called *Survival Instinct*, the fourth track on the album. The whole structure and everything was pretty much done in like two and a half to three hours. So all the layers were recorded, and everything was done in one take. I remember it was a Friday, and it was before me and a couple of friends were going out for drinks. And I was literally just thinking, maybe I'll just try to finish the track really quickly, so I have something to show them in the car later. But I forgot about taking it along, because I rushed out, and then I didn't go back to the studio for a couple of days.

"Revisiting it later, it was so interesting because it really felt like I had almost forgotten how I made it, and it was this very

instantaneous, spontaneous song that I didn't feel like changing anymore. In electronic music, there are so many ways to change and alter things, to overdub, to make things perfect. But with that track, the charm was in the imperfection, or the perfection of the imperfection. That gave me a bit of courage."

There's often something magic about that first idea, that first spark of creativity in a session. It's sometimes hard to recapture that feeling when you return to a project after that.

"Exactly. We tend to want to control things that sometimes aren't in our control. Sometimes there's this little fountain of creativity, I believe, that just gives you little presents. You think it was your idea – religious people would speak of God, and maybe psychologists would speak of the subconscious or the unconscious – but it just feels like a little gift you sometimes get. You can alter it too much when you think it's you doing it."

Did you experiment with any new studio techniques or processes on this album?

"The main thing was to get away from editing and micro-processing and changing things. Also to play throughout an entire song. Sometimes with click tracks, sometimes without. Making arrangements without editing, and even if it was for effects or something. That's why the rhythm of this album is so unique, because everything is always slightly floating.

"Another thing was a sense of reduction. I often get associated with very dense harmonies and thicker chords, so I wanted to substitute that from my process. I tried not to think in harmonic structures but more in melodic structures."

Looking back a bit now, how did you first get involved with music production and electronic music making?

"When I was 15, a friend of mine and I started off with Magix Music Maker. It was also, as I mentioned before, through hip-hop production. We were fascinated by noticing that DJ Premier sampled this track from the '60s, for example. Finding the source, and digging and finding certain songs that were used in hip-hop and rap music. This made us curious about finding our own jazz samples and making our own beats with that. I quickly moved over to Reason 1, then it just went from there. I was producing music, and at the same time, we also had a band where I was playing keyboards, a good friend of mine Paul was playing guitar, and my good friend Clemens, who also makes music as Cid Rim, was playing drums. We were very ambitious teenagers in the sense that we were always trying to juggle these three things. It's something that makes me happy now that I'm older, that I got an insight into these three different areas of music."

Are you still using Reason today?

"I've not used Reason since *Joined Ends*. I've switched over to Cubase. When I was working on Reason, at some point, I just got frustrated. In the early days of Reason there wasn't really a live recording option. So I always had to load samples into the samplers and then find the starting point, when I began recording more and more live instruments and playing keys live. I've never worked with MIDI. So I've always just used audio sources to record, and in the case of Reason I just used a sampler to sequence it. Now in Cubase, I literally just record sounds, manipulate them or compress and equalise inside the software."

What is it that led you away from MIDI and towards working exclusively with audio?

"It feels more direct to me, somehow. With MIDI – and this is obviously just a bad memory – but I've had latency issues, maybe 12 years ago. [*laughs*] It's just a bad memory that's stuck with me, but I'm always worried that something might not be working or, it just doesn't feel as direct as just an audio output. There's something instantaneous about being able to turn on a synthesiser, take the audio cable and know that whatever you're recording isn't being morphed in any way.

"At the same time, I love that there's a limitation to every device. If I play something on the SH-101, it's like a similar relationship to a friend. There's the friend that you go for if you want to discuss your depression, or the friend that you'd go for a beer with to forget about it. I love having a unique relationship with each instrument. Sometimes you have to say goodbye to them. The microKorg for example, I probably won't be using again."

Which instruments stand out as ones that have stuck with you throughout your career?

"The microKorg, but it's a complicated, love-hate relationship, as is often the case with the first big one… it just leaves you with a weird feeling, but it initiates you. That's what the microKorg did. Having travelled with it so much and used it in so many tracks, up to 2014. It's all over my production.

"A friend of mine had a Wurlitzer in his rehearsal room, with the band that we were in. That was always something that we loved hearing in records from the '60s and '70s. I always liked that it was a bit less popular than the Rhodes. The Wurlitzer is definitely an instrument that has a special place in my heart.

"ONCE YOU'VE GOT MORE THAN TEN UNITS, YOU STOP EXPLORING THE GEAR AND YOU'RE JUST FIDDLING AROUND AND DISTRACTING YOURSELF"

"The Korg Kronos, for my 2018 album *The Nature of Imitation*. It's a workstation, where you have so many options. It mirrors the process, interestingly. Like Marshall McLuhan says, the medium is the message. With the options of all these instruments, it correlates with how the album sounds. The Kronos is such a beast, such a big workstation, you can do so many things with it, and in that album, you can hear how I'm just trying to explore all the corners of that workstation.

"Then the Roland SH-101 has been accompanying me over the last decade as well. I've been getting deeper and deeper into it, having heard it on so many amazing records – *Selected Ambient Works*, and '90s dance music – it just feels like a soulmate of sorts."

You lean towards hardware when it comes to instruments. Is that the same for effects as well, or do you use any plugin effects?

"I definitely dabble in plugin effects. What I've noticed also with pedals, which I've also gotten into a little bit – and some of the Eventide gear like the Space reverb – is that there's a different feel. When you record a melody line and you have an effect on it, there's something that I do differently timing-wise. You might settle for less than if you just record a line and add the effects afterwards.

"My computers have never been powerful enough for me to play stuff while I have certain plugins chained into them. I love recording things with effects, reverbs, delays, compression, already on it, because it creates an instantaneous sound. I like not having too many options. It's similar to analogue photography, when it's dependent on whatever light you have there right now. I love capturing the spirit of a certain idea or a certain sound as quickly as possible.

"I've got the Eventide Space, I've got a Space Echo in my studio as well. I got the BOUM from a company called OTO. I really like that one. There's a great filter on there and the compressor is really unique."

How often are you experimenting with new gear?

"There are under ten units, both keyboards and effects, that stay in a constant rotation in my setup. Amongst these ten, there's some that will be on the desk, some off the desk. I don't know who said this in an interview, but they said they saw someone's studio perfectly set up with tons of gear spread throughout the entire room, and they said it sounded like a nightmare, like: how can you be creative in a room where you've got everything? It feels to me that once you've got more than ten units, then you stop exploring the gear and you're just fiddling around and distracting yourself from making music."

Is there anything that's on your wishlist at the moment?

"I've actually been getting into video gear and video synthesis, so there's one thing, the Roland Edirol CG-8. You can't really find them. I've been getting into the analogue video synthesis world. It's the first time that I did a couple music videos for my own tracks, for this album.

"On the audio side, it's the first time I'm happy. I'm more at the point where I'm willing to let things go. It's interesting that you mentioned soft synths. I might try to dive into this world a bit. I had this idea of trying to find really old soft synths, or trying to work on really old audio software. Maybe with some stock MIDI stuff. We're at a point now where it could be interesting to look back at older software. It must create a specific sound when you're not always looking for the newest and best virtual instruments, but maybe when you try to see all the fun stuff that was there before, that you didn't see the creative potential in."

It's an interesting idea. People fetishise old vintage gear, but you don't really see the same thing in the software world.

"Exactly. That's right. But we're getting to that point. Maybe I'll have to find someone who still has a functioning Windows XP computer or something. [*laughs*] It could be worth it – it could be a good story." FM

WANT TO KNOW MORE?

Dorian Concept's new album, *What We Do For Others*, is out now on Brainfeeder Records

Korg Drumlogue £529

Some two years after it was first announced, Korg's hybrid drum machine is finally here. **Si Truss** finds out if it's worth the wait

CONTACT **WHO:** Korg **WEB:** korg.com **KEY FEATURES** 11-track drum machine with four analogue channels, six digital sample channels and one customisable 'Multi-Engine'. Also features audio input, three effect slots (delay, reverb, master effects), 64-step sequencer with full parameter automation

THE PROS & CONS

+

Versatile sound that blends analogue drums, samples and digital synthesis

Highly customisable with user samples and open-source synth and effect SDK

Per-step randomisation and parameter automation

–

Compact hardware means a lot of functionality is hidden behind shift presses or menus

Several instruments share front panel controls

Multi-engine can't be played chromatically (but can be sequenced internally at different pitches)

First announced in January 2021, Drumlogue is a – by now eagerly awaited – percussion-focused addition to Korg's popular Minilogue, Minilogue XD and Monologue.

On paper, there's certainly a lot that appears exciting about the Drumlogue. This is a hybrid drum machine that combines analogue percussion synths with a multi-track sample engine and 'Multi-Engine', which is an open-source digital oscillator that can be updated with custom synths and effects. Now that we finally have our hands on one, does it live up to the hype?

I was slightly surprised by how small it is in the flesh. While none of the other instruments in the range are massive, per-se, they're all substantial, with a decent crop of controls spread out across spacious interfaces. Earlier photos hinted at a Monologue-sized affair, but in reality it's broaching 'mini synth' territory.

While some will undoubtedly appreciate how compact it is, I'm not sure that being the smallest in the range does the Drumlogue any favours. In fact – and let's get this out of the way early – I'm not a huge fan of the hardware in general. That reduced size means that a lot of features here are hidden behind multi-page menus and shift presses – some of which are slightly clumsily implemented. Compounding this is the choice of a mostly black design, labelled with small writing in white and grey – the latter used for shift functions that become virtually unreadable in anything other than bright, direct light. The buttons fare better, being backlit, and the bright screen helps considerably.

It performs a lot better on the connectivity front though. Along the rear panel we get six individual, routable outputs plus a headphone output. These are accompanied by an audio input, analogue sync input and output, MIDI in and out, and two USB ports – one for connection to a DAW, and a second for connecting a USB MIDI device.

Control-wise, the key sound shaping parameters use the same rotaries found on the Mini/Monologues, which are solid and sizable, but track volume levels and the tempo control are relegated to fiddly, Volca-style controls. A row of buttons along the lower edge of the unit acts as sound trigger and step-sequencing controls, but these are shallow and clicky, lacking the satisfying heft of sequencers on rival machines from the likes of Roland, Arturia or Behringer.

It's worth getting these criticisms out of the way early, because beyond these qualms there's a lot to love about the Drumlogue. Firstly, the versatility of sound – scanning through the stock programs (presets that combine a drum kit and pre-made pattern) it quickly becomes clear how many styles Drumlogue can turn its hand to. These programs do a solid approximation of everything from Drexciya-style electro to moody big-room techno, skippy UK garage, chilled lo-fi, '90s IDM and more.

Key to this versatility is the balance of analogue and digital sound sources. The analogue section consists of bass, snare, low and high toms. Each of these has a fairly minimal array of front panel controls (the toms share a single set), consisting of decay and tuning, plus a third parameter that varies between each – drive for the bass drum, 'snap' decay for the snare, and detune for the toms. The full extent of sound shaping available goes much deeper than this though, with a range of settings available via the controls under Drumlogue's screen. Using these it's possible to, for example, shape the pitch sweep of the bass drum, apply bi-directional resonant filters and increase the attack punch of each sound. These analogue generators actually use a hybrid approach to sound creation, allowing users to blend a sampled attack

THE ALTERNATIVES

Elektron Syntakt £849

Syntakt's analogue and digital synthesis capabilities are more versatile, although it lands at a higher price point

elektron.se

Roland TR-8S £580

Roland's drum machine similarly blends samples and synthesis, albeit with virtual analogue rather than the real thing. Its larger size is better for hands-on performance tasks

roland.com

Novation Circuit Tracks £300

More comprehensive when it comes to digital synthesis, but more lightweight on the drum side, Circuit Tracks is nevertheless a great all-round groovebox

novation.com

sound over the top of the main analogue body, which can do a lot to alter the character of each drum sound and add extra punch.

The digital section, meanwhile, consists of open and closed hats, rim shot, clap and two generic sample slots. Again, front panel control is pretty minimal – just decay length for the hats and clap, and shared attack, decay and tuning controls for the sample tracks – but as with the analogue elements, there's a lot more to tweak under the hood. This includes selecting the source sample, adjusting tuning, control over attack or release times (depending which track is selected) and filtering. Users can also apply drive and bitcrushing effects to sampled sounds.

The final sound creation element is the Multi-Engine, which has three modes. The first of these is a VPM – variable phase modulation – engine. VPM sits in a similar sonic ballpark to FM synthesis or the phase distortion. Here, it's deployed through an array of seven presets, each of which can be adjusted using controls to adjust the amount and ratio of phase modulation, as well as by altering the amp envelope and filter cutoff.

The second mode here is a noise generator, with seven types of filtered noise available, plus controls to adjust the frequency and resonance of the filtering, plus attack and release.

The third Multi-Engine mode is a user mode, which can host sound generators created with the open source SDK. By default, Drumlogue ships with Sinevibes' Nano synth in this slot, which is a dual oscillator digital synth that's particularly great for making rhythmic pulses and pitched percussion.

Drumlogue also has a trio of digital effect slots, comprising delay and reverb sends, each with presets and control over timing and character, along with a master effect section. The instrument ships with four master effects – a compressor, filter, boost/saturation and a three-band EQ. However, as with the Multi-Engine, the selection of master effects can be augmented with effects created using the open SDK. This opens up some tantalising possibilities to go beyond the rather conventional remit of the four stock effects. Drumlogue allows users to route individual tracks to bypass the master effect, as well as apply any as a sidechain input, which

> There's a lot to really like here in terms of versatility and functionality

CUSTOMISATION

One key aspect of Drumlogue's appeal is how customisable it is. There are two main ways that users can put a stamp on the instrument's sound. The first is through imported samples, which can be loaded onto the internal memory and used as sources for the six digital tracks. Drumlogue natively uses WAV files in 32-bit float with a sampling rate of 48KHz, but will accept and convert WAV samples in any sample rate. The second way it can be customised is by uploading user or third-party created synth or master effect, as mentioned. The process for importing samples, synths and effects is fairly easy across the board, by way of connecting the instrument to a computer via USB and dragging and dropping the relevant files. Drumlogue is also set up so that it can be enhanced with full expansion packs, which we assume Korg will release in the future.

offers a lot of potential for wild and rhythmic effect treatments.

Drumlogue's sequencing workflow is flexible too, although, again, much of it is hidden within menus. Sequences can be up-to 64 steps in length, with a variety of timing settings including the ability to set the sequencer to playback in a triplet rhythm. For swing and groove, Drumlogue uses global groove templates as opposed to a single swing parameter. These templates include typical eight and 16-note swing, plus others based on typical conga, tambourine and agogo grooves, Baile funk, syncopated rhythms and more. Each template applies both velocity and timing, the emphasis of which can be increased in positive or negative directions. You can also apply different grooves to each sequencer track, as well as set individual step lengths for each sequencer track – although doing so requires shift pressing multiple buttons and isn't very well labelled.

Each sequencer step can be assigned a probability for its trigger and – in Elektron-like style – each can be set to trigger only on certain alternate repeats of the sequence. Drumlogue also offers extensive automation sequencing, dubbed Motion Sequencing here as on other Korg instruments, although unlike its counterparts, Drumlogue isn't limited to a set number of automation tracks, offering full automation of every sound parameter. This is particularly handy for sequencing the Multi-Engine synths or pitched percussion samples, allowing Drumlogue to sequence melodic patterns and bass parts. It's a shame, however, that the synth engine can't be played chromatically, either from the front panel or an external controller – an odd oversight, given the inclusion of the secondary USB port that appears tailor-made for a MIDI keyboard.

Beyond the loop stage, Drumlogue has a comprehensive chain function that lets users sequence up to 16 programs end-to-end, allowing automatic switching of both patterns and drum kits. There's also a fun loop function, that lets users loop selected sequencer steps, allowing for the creation of stutters and turnarounds.

There's a lot of versatility then, although, as noted, elements of the workflow remain clunky. The high tom is a prime example – it shares front panel controls with the low tom, meaning users need to hold shift to make adjustments. However, since the sequencer steps double up functionally via shift presses themselves, if you don't remember to let go of shift before auditioning the sound, you'll accidentally trigger the low tom step's secondary function – which clears the current track. This makes it far too easy to accidentally delete an element of your current sequence while trying to adjust the tom's sound.

The mute function is a little annoying too, as it requires users to always hold 'mute' while selecting tracks, which makes it harder to mute/unmute multiple tracks at once. There's no solo function either, which limits the functionality when it comes to jamming on stage or in the studio.

I suspect that none of these drawbacks are likely to stand in the way of Drumlogue becoming a popular drum machine. There's a lot to really like here in terms of versatility and functionality, particularly given the price point, but the hardware just holds it back from being an unequivocal success. FM

SCREEN: In step mode, Drumlogue's screen shows a full, MIDI-clip like view of your complete groove, which is a really nice touch

ROTARIES: The grid of 15 rotaries offer hands-on control over a few key sound parameters, although barely scratch the surface of what's on offer

SEQUENCER: Drumlogue's sequencer buttons are shallow and clicky, nowhere near as satisfying as some rival drum machines

LABELLING: Whoever decided that a grey-on-black colour scheme would be convenient for labelling secondary functions needs a talking to

FM VERDICT

8.4

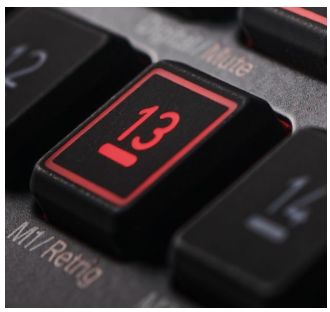
A flexible, powerful drum machine that has a lot to offer for the price, only slightly held back by some clunky design choices

FutureMusic Platinum Award

Elektron Syntakt £849

Elektron's latest groovebox borrows sounds and ideas from various places in the company's product line. **Si Truss** asks if this is more than the sum of its parts

CONTACT **WHO:** Elektron **TEL:** +44 (0)1447 765765 **WEB:** elektron.se **KEY FEATURES** 12-track hybrid groovebox with four analogue tracks, eight digital tracks, plus an analogue effect track and reverb/delay sends



THE PROS & CONS

+

Excellent balance of analogue and digital sound sources

Percussive synths double up as meaty melodic generators

Deep sequencing workflow, complemented by Overbridge compatibility

–

Limited hardware I/O

Workflow will likely still take some getting used to, for those new to Elektron gear

In the early 2010s, Elektron were known as a brand responsible exclusively for deep, high-end gear. The likes of Octatrack, Analog Rytm and Analog Four were up there with the best hardware instruments on the market, but prices for each hovered at the £1k mark and you'd need a week to read the manual.

Over the past decade the Swedes have dipped into more affordable territory, right down to Model:Cycles and Model:Samples, each of which can be picked up for under £300.

Arguably, however, the point where Elektron really hit the 'sweet spot' was with the launch of Digitakt, their mid-priced, multi-track sampler. While Digitakt is undeniably more accessible than Elektron's other sampler, Octatrack, it still boasts plenty of the depth and creativity we now associate with Elektron gear. A similarly priced and sized follow-up, Digitone repeated this but with a unique take on FM synthesis.

On the surface, Elektron's latest groovebox Syntakt appears to be a neat third entry into this range. It comes housed in a chassis that's the same size as both of those instruments, with a control layout almost identical to that of Digitakt. There is certainly a lot that's similar across the trio, particularly when it comes to the sequencing workflow. For all that Elektron gear can take a bit of getting used to – and there are still plenty of eccentricities on show here – prior users of Digitakt and Digitone will find themselves instantly at home with Syntakt's layout/design.

What makes this more than simply a synth-minded version of Digitakt, though, is that Syntakt sees Elektron returning, at least in part, to analogue sound generation, in contrast to the entirely digital designs of Digitakt and Digitone.

In terms of its sound engine, Syntakt has a lot in common with Elektron's Analog Rytm, not only in its use of analogue percussion synths, but also in the way it uses distinct 'machines' to generate different types of sound.

However, whereas Rytm balances out its analogue elements with sampled hits, Syntakt combines

THE ALTERNATIVES

Korg Drumlogue
£529

Also blending analogue and digital, Korg's new drum machine is slightly less slick, but it's also cheaper

korg.com

Elektron Digitakt
£849

Syntakt's sample focussed sibling has a similar workflow and form factor, but with a different sonic remit. They pair nicely too

elektron.se

Roland TR-8S
£590

Roland's drum machine pairs faux-analogue sounds with samples and basic FM percussion, creating a very broad palette

roland.com

analogue synthesis with FM-derived digital generators.

There are 12 tracks in total here, of which four are analogue and eight digital. In all cases, each track can be assigned one of several 'machines', which are effectively base presets specialising in a certain sound type or synthesis style.

The analogue tracks are divided into three drum tracks and one cymbal track. The drum tracks can each make use of a selection of 16 machines, which include a variety of kick drums, snares, rim shots, a pair of tonal synths, and noise and impulse generators. The cymbal track offers 12 machines, covering assorted hat and cymbal types, plus noise and impulse again.

The digital tracks, meanwhile, are identical, with 11 machines covering kicks, snares, cymbals/hats, claps and percussion, plus a selection of five tonal instruments. These digital machines are FM-based, derived from those found in Model:Cycles, albeit adjusted to offer more control over sound shaping and match Syntakt's signal flow.

While each machine is preset-like in its basic setup, each has up to eight adjustable parameters that can be controlled from Syntakt's Synth view. The precise setup of these changes for each machine, but they generally offer decent depth in order to adjust the tuning, shape and timbral qualities of each sound. Beyond this synth section, each machine follows a broadly similar signal path, first through an overdrive module, then resonant multimode filter and into an amp. Each machine also has its own ADSR envelope to shape the filter cutoff, an envelope – switchable between ADSR and AHS – for the amp, along with two flexible LFOs that can be routed to pretty much any parameter in the signal flow. Modulation can also be routed from external MIDI sources such as velocity, aftertouch and pitchbend.

There are a few small but key differences between analogue and digital tracks. For the former, the machines, overdrive, filter and amp are all analogue, but controlled by digital modulators and accompanied by a digital noise generator. The digital tracks are end-to-end digital, and add a second base-width filter in before the resonant filter. Every track can also be switched to become a MIDI machine, where the sequencer outputs to external gear rather than sequencing the internal engines.

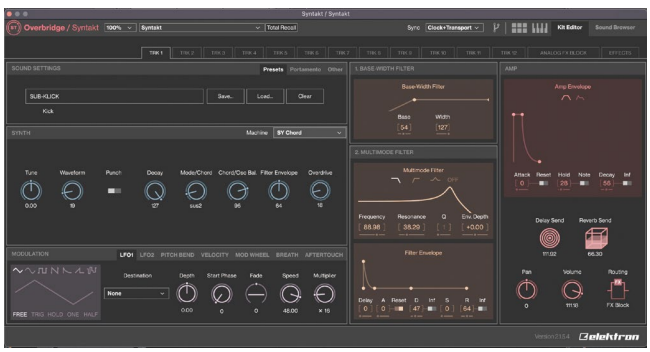
Although percussion is Syntakt's obvious focus, there's a lot of sonic range available from the full line-up of machines. On the drum side of things, the balance of analogue and FM covers everything from classic xOx-alike tones to modern metallic percs and gritty, noisy hits. The inclusion of multiple types and sources of overdrive is a great touch, and particularly in the case of the analogue machines it means that Syntakt is capable of some brilliantly meaty, saturated drum hits. To point out the obvious, Syntakt's overall sound leans toward the synthetic – don't expect the sort of realism you'd get with a sampling drum machine,

> Overdrive is great; Syntakt is capable of some brilliantly meaty, saturated drum hits

OVERBRIDGE

Elektron's Overbridge has been around since 2015 and – following a long beta phase and a slow rollout – is now at version 2 and working better than ever. Effectively, Overbridge lets any piece of Elektron gear function as a plugin in your DAW, with full streaming of audio from/to the hardware via USB, along with total recall of all parameters.

From a studio point of view this really adds to the usability, as it lets users individually output every channel, including the effects block, for individual processing, all without affecting any analogue I/O on your audio interface. It also means that almost all of the synth's parameters can be automated and modulated like any other VST, depending on how your chosen DAW is set up.



Overbridge's interface is nicely designed too. If nothing else it offers a clear and understandable layout of what's going on under the hood of Syntakt.

particularly when it comes to the crisp, metallic cymbals. Within the remit of synthesised percussion though, this is one of the most versatile machines going.

That flexibility reaches into more tonal and melodic realms too. There's plenty of creative fun to be had by ditching the percussion parts entirely and using only the tonal generators to create purely melodic patterns. Used as such, the analogue generators can double as remarkably meaty two-oscillator monosynths, while the digital generators can create chord stabs, crunchy bit-crushed melodies, tuned percussive hits and 'swarms' of six detuned oscillators, which work great for throbbing pads and drones.

Alongside the sounds themselves, Syntakt packs a solid complement of effects. Each track can be sent to reverb and delay auxiliaries, which will be familiar to users of Digitakt and Digitone. While these aren't the most versatile effects out there, each has controls for adjusting the timing, plus filters for shaping the output.

Syntakt also features a separate analogue effects channel, which combines an additional drive circuit with a resonant multimode filter, along with its own envelope-controlled amp section. The effects track also has its own filter envelope and two LFOs routable to any of its parameters. Any of the other tracks can be routed here, and it gets its own virtual output when used with Overbridge [see boxout]. As mentioned, the various sources of drive and distortion are the stars of the show, but it's a well rounded set of happening tools altogether. A master compressor and EQ would be nice, but you won't feel hard done by.

The sequencing workflow is characteristically deep and creative. As with Digitone and Digitakt, the 64-step sequencer boasts full per-step parameter automation, probability and conditional triggers, and plenty of flexibility over playback speed, individual track lengths and step micro-timings.

One thing worth mentioning is Syntakt's Modifiers. These are a pair of modes that let users play any sound combined with up to four preset parameter changes. Essentially these let users trigger multiple alternative versions of each sound. It works particularly nicely for jamming with different chord shapes or bursts of reverb and delay-heavy percussive FX. Along with these, the sequencer also has retrigger and velocity modifiers, the first of these creates a quick way to generate rolls and fills across four different beat divisions, while the latter lets users quickly trigger four different levels of velocity. Syntakt's effects track has its own sequencer lane too, where users can input triggers for the track's LFO, amp envelope and/or filter envelope, with the same probability controls as the other tracks.

Although Syntakt is an obvious counterpart to Digitakt and Digitone, it's also a bit like a greatest hits for Elektron, with many of the features that made its two siblings so popular but sounds and effects that build on elements of the Analog Rytm, Model:Cycles and even Analog Heat. Overall, it's possibly the most versatile of the Tone/Takt range, yet it feels like the most immediate and streamlined too – largely because it benefits from inheriting all the sequencing tweaks and refinements that have been added to its counterparts across various firmware updates.

I'd argue its biggest drawback is the lack of analogue outputs, with just two main outs and a headphone output on the rear panel. This leaves no option for individually processing the 12 tracks when used in a purely hardware setup, although Overbridge offers a simple way around this for studio use and laptop performances.

Minor drawbacks aside, Syntakt may just be the best groovebox you'll find for under £1000 right now. FM

LOOK FAMILIAR?: Syntakt's size, shape and control layout are almost identical to that of Digitakt, and very close to Digitone too

SOUND FAMILIAR?: Sonically, many of the 'machine' presets are based on those previously seen in Analog Rytm and Model:Cycles

I/O: Syntakt's rear panel has a pair of main outputs, pair of audio inputs, MIDI in/out/through, USB and a headphone output

SEQUENCER: Elektron's sequencing workflow can still be baffling for newcomers, although Digitakt/tone users will feel right at home

FM VERDICT

9.6

Building on the successes of multiple other Elektron instruments, Syntakt is a top quality groovebox with a lot of power under the hood

sE Electronics DM2 TNT £119

The DM2 TNT is an ultra-quiet, inline preamp that provides a lot of bang for your buck, says Simon Fellows

CONTACT **WHO:** sE Electronics **WEB:** seelectronics.com **KEY FEATURES** **IMPEDANCE:** 135 Ohms **FREQUENCY RANGE:** 10Hz-120kHz (-0.3dB) **GAIN:** 15dB/30dB **MAX OUTPUT LEVEL (0.5% THD):** 9.5dBV (3.0V) **OUTPUT NOISE LEVEL:** 1µV @ 15dB/6.6µV @ 30dB **CONNECTIVITY:** 3-pin male/female XLR **POWER:** 48V phantom **DIMENSIONS:** 19 x 96mm **WEIGHT:** 80g

First sE Electronics gave us the DM1 Dynamite, an inline preamp that resembles a red stick of, well, dynamite. Then there was the NEOM USB microphone, with its gain dial that goes to 11, and now we have the DM2 TNT that looks like another stick of high explosive, this time in fetching Cobalt blue. It may look like a joke – we particularly like the faux fuse that pokes out of the lid, and the stencilled T.N.T lettering – but sE are deadly serious about this somewhat explosive product.

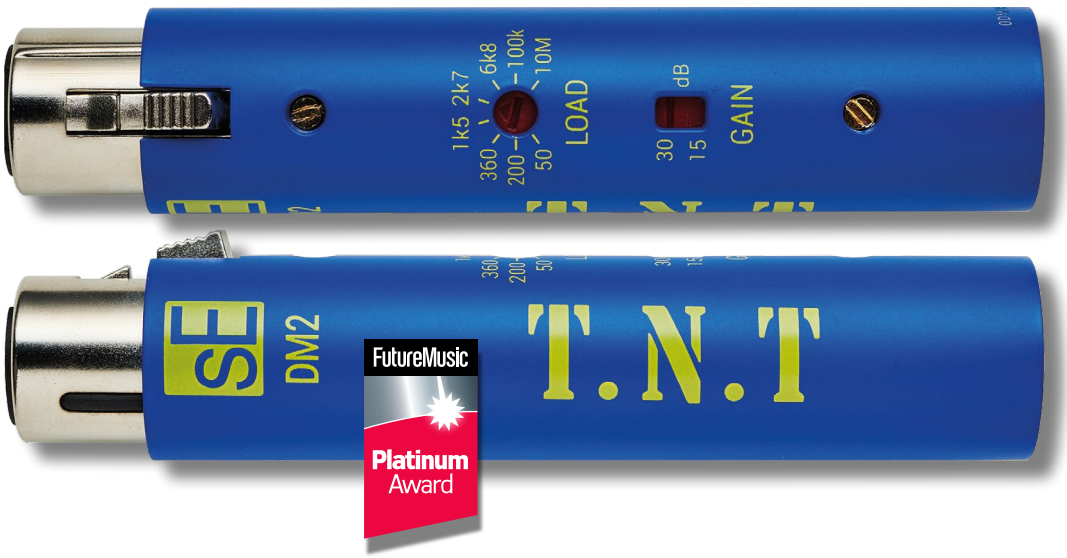
Like the DM1 it's a low noise, active, inline preamp intended to address two common problems for owners of passive dynamic and ribbon microphones – insufficient gain and impedance compatibility issues.

Ribbon and dynamic mics work very differently but both have low sensitivity components (a ribbon mic doesn't have a capsule, as such) that need a significant amount of clean gain to output a signal of sufficient strength. Turn the gain right up on an entry-level interface and you'll just end up with a noisy, lacklustre recording. The DM2 TNT, and the DM1, rectify this by providing up to +32dB of glorious, noise-free gain.

Ribbon mics in particular need a high impedance preamp to sound their very best. A preamp's load impedance should be at least five times higher (some say ten) than your mic's output impedance. Give it less and you'll rob your ribbon of its low-end performance and some top-end response (ie, it'll sound rubbish).

Fortunately, the DM2 has eight impedance load settings that vary from 50 ohms to 10 mega ohms, which is probably higher than you'll ever need. If you own a dynamic mic, impedance isn't quite as critical, but you can still use these load settings to creatively shape your tone. It's like having multiple mics in one.

The DM2 is beautifully constructed in an all-metal housing that's built to take a battering. It's a tiny device that's less than 10cm tall and weighs just 80g. Which is just as well, because sE recommend it's plugged directly into your microphone to reduce the possibility of noise creeping in through any additional cabling. This isn't really an issue for studio use but, small and attractive though it is, extending a mic by almost 10cm may be an unacceptable look for some YouTubers and live performers.



We tried an SM7B and the effect of this preamp was no less than transformative

The features are few, but powerful. There's a tiny switch to select +15dB or +30dB of gain and a weeny rotary dial to dial in one of the indented 50, 200, 360, 1.5k, 2.7k, 6.8k, 100k and 10M ohms settings. I can't overemphasise how small these controls are – suffice to say that sE Electronics provide a diddy miniature screwdriver to flip between settings.

Operating the DM2 TNT couldn't be easier. Just plug it straight into your dynamic or ribbon mic and hook the other end up to a 48V phantom power source. Selecting a setting is fiddly, so it's not going to be something you do on the fly. At least there's no risk of changing your chosen settings inadvertently though.

While we're on the subject of mishaps, the DM2 TNT will obviously protect your otherwise defenceless ribbon mic from being accidentally fried by phantom power, which is a minor bonus but a very good one.

We tried an SM7B with a variety of inexpensive interfaces, and the effect of this preamp was no less than transformative. In theory, if you don't need a whole +30dB of clean gain, selecting +15dB should give quieter results, but in practice we noticed little difference. What was evident was that the SM7B instantly became usable. Quiet and well-behaved with no adverse effect on tonal character but a huge reduction in noise.

Playing with the impedance load was interesting. As expected, choosing a low setting made our mic sound like it had undergone a charisma bypass. Similarly, selecting any of the very high settings restored its full personality. It's the middle numbers where the tone-shaping magic happens, but the effect between one setting and the next is quite subtle. Nevertheless, the DM2 TNT does give you the opportunity to best match a mic's character to your talent, without having to destructively play around with EQ. FM

FM VERDICT

9.0

Breathes fiery new life into a passive mic ravenous for more gain, and its varied impedance settings reveal the character of a ribbon mic

THE PROS & CONS

+

Provides copious amounts of clean gain

Generous variety of impedance settings

Excellent build quality

–

Needs to be attached directly to the mic for best results

IK Multimedia Tone X Capture £233

IK have come up with an easy way to feed your hand-crafted guitar tones into your amp and cab sim ecosystem. **Andrew Price** found out more

CONTACT **WHO:** IK Multimedia **WEB:** ikmultimedia.com **KEY FEATURES** Model your own guitar rig, and import the sound of your amps, pedals and cabs

Many guitarists spend countless hours experimenting with pedals, amp settings and core cabinet-miking zones to produce a tone that suits. With the advent of top-flight amp/cab simulators, and dexterous effect-chain modelling in software (notably, IK's own AmpliTube) it's now easy to do this entirely in the box.

To the ears of some holdouts, however, these software-sculpted tones might lack bite, gain and, crucially, the venue-filling results that their own hardware has already yielded. Heeding these desires, IK Multimedia have created a new hardware/software combination with the express intention of analysing the particular qualities of an external signal chain for software replication. Then, the particular tone of your pristine hardware can be called on, whether in the studio or on-stage.

This new bridge between two worlds comes in the shape of IK Multimedia's Tone X Capture. This small, yet strongly constructed I/O box enables you to feed your amplifier (or pedalboard) line-out into your interface and record the incoming signal, before some intelligent on-the-fly AI modelling software renders a multi-dimensional virtualisation of your tone. It can also be used as a nifty re-amplification device, taking a line out signal from your interface and outputting the results with your chosen amp.

It's really Tone X Capture's rig-catching capabilities that we're keen to test. Coupled with IK's accompanying Tone X software suite, the combo of hardware and software presents the most complete universe for injecting tones out of the real world and into our hard drives that we've yet seen, particularly when run within IK's guitar hub, AmpliTube.

The software itself comes pre-loaded with previously captured tone models, all of which have harnessed the company's proprietary AI Machine Modelling tech. While these are varied, they're nothing short of substantial, yet it's our own home studio guitar tone we want to save.

Once wired up (instructions can be downloaded) the software does a simple test and sends your rig a specially prepared file, to then study. Before it can build the virtual version of the tone, the software asks you to choose from a Fast, Default or Advanced model; once done, we're presented with a fully playable version of our tone. For us, the valve-driven beef of a delicately EQ'd Marshall JCM200 is now fully explorable in our MacBook, while our actual amp sits unplugged. While the gain and length of feedback decay often goes hand-in-hand with cranking up the volume, the Tone X Capture has an all-important attenuator knob, which can neatly take in the richness of our full frequency tone, while offsetting some of the volume.

The accuracy of the Advanced modelling was stunning. Saved tones and profiles can then be uploaded to IK's ToneNET cloud repository, facilitating sharing of rigs and unique setups. The hardware/software bundle provides a remarkably brisk route to satisfying that long craved-for itch for taking your prized amp tone into the digital domain. FM

FM VERDICT

9.2

Tone X gives guitarists the power to enter the software matrix without losing their fine-honed real-world tone. An impressive breakthrough

THE PROS & CONS

+

An easily set-up bridge that connects your hardware world with IK's guitar ecosystem for two-way communication

Creating a tone profile from the input signal is refreshingly straightforward, and the AI-constructed results have to be heard to be believed

Huge array of additional tone profiles, and further editing can create heaps of new sonic combinations

–

If you want the most detailed model of your tone, it might take a while

Requires you to own a healthy assortment of jack leads and XLRs (which most of us do, to be fair)

Arturia MiniLab 3

€99

The popular mini keyboard controller is back with a refreshed new look. **Jon Musgrave** runs it through its paces

CONTACT **WHO:** Arturia **WEB:** arturia.com **KEY FEATURES** 8 velocity/pressure sensitive pads, 8 rotary encoders, 4 sliders, Capacitive touch-sensitive pitch bend and modulation, Mini screen with push button rotary encoder, Mackie Control support and dedicated DAW scripts, Arturia Analog Lab integration, Built in arpeggiator, Chord mode, MIDI 5-pin output, USB Powered, Recycled plastic components

MiniLab 3 is the latest incarnation of Arturia's 25-minikey MIDI controller keyboard. Available in black and white versions, it has the same footprint as the MkII and weighs the same, but now has a slicker overall look. It's also made with 50% recycled plastic and a 5-year guarantee.

The new overhauled top panel is now graced with eight ultra smooth continuous controllers, four sliders and a mini display with accompanying push action rotary encoder. You also get eight velocity and pressure-sensitive RGB backlit pads with a 2-bank configuration. The MiniLab 3 keyboard has an excellent positive action that's consistent across the keys with minimal mechanical noise. The pitch bend and mod wheel are the touch-sensitive slider type and these work incredibly well. It's also great to see polyphonic aftertouch generated by the pads and this dovetails with many patches in Arturia's Analog Lab (the Intro version is in the software bundle). Above the pitch bend are four buttons including Shift, which combine with the pads and display for further onboard features including chord memory and the arpeggiator.

Connectivity and power is via a USB C connector and the box includes a 2m USB C to USB A cable with handy angled USB C plug. On the back there's also a 5-pin MIDI out and a ¼" pedal controller input. The controller input can be configured for sustain, foot switch or expression, and these settings along with many others are handled via Arturia's MIDI Control Centre application (Mac/PC).

The build quality is impressive, but it's also important that it integrates properly with your software, and this is an area that Arturia have focused on. MiniLab 3 has two factory modes (DAW and Arturia) and five user configuration memory modes and also supports Mackie Control protocol. In DAW mode, four of the eight pads combine with the Shift button to provide transport controls, and there are also DAW-specific scripts that extend the DAW mode features. This worked particularly well for Live, with pads assigned to clip and scene functions, and sliders controlling track, pan and send levels.

Arturia mode is designed for use with their Analog Lab and offers an excellent integrated experience. The mini display handles preset browsing, meanwhile knobs and sliders on the Analog Lab layout match the MiniLab 3 layout, with parameters including brightness, timbre, effects levels, master EQ and output level. Switching between modes and user memories takes only two buttons and the overall experience is super slick.

If you already own a MiniLab MkII and are thinking of upgrading, you'll need to weigh up the extra options such as MIDI out and the reconfigured panel. For new users it's definitely one of the best in its class and offers fantastic value. If you need a little more persuasion, there's an excellent software bundle too! FM

FM VERDICT

9.3

Not only great value but upgrades the feature set and quality to deliver one of the best mini keyboard controllers available

THE PROS & CONS

+

Quality construction and stylish design

Good DAW support

High quality smooth knobs and faders

Great Arturia Analog Lab integration

Pressure-sensitive, backlit pads

Excellent value

–

Not necessarily worth an upgrade, if you already own a MiniLab MkII

Klevgrand Tomofon $129

The Swedish developers' 'real audio synth' is the company's biggest release yet. **Si Truss** sees what it can do...

CONTACT **WHO:** Klevgrand **WEB:** klevgrand.se **KEY FEATURES** Polyphonic audio synthesiser that blends elements of sampling and wavetable synthesis. Features four independent voices, low pass ladder filer, delay, reverb and master EQ

Prolific Swedish developers Klevgrand have released a real variety of plugins in recent years, although most have tended to be fairly small-scale and focused. Tools such as the Rum room emulator, Skaka percussion sampler and Fosfat 'transient fertiliser' have each focused on a fairly niche element of the production workflow, albeit usually in innovative and slightly kooky ways.

Tomofon is by far the developers' most substantial release to date. This is a virtual synth that blends elements of sampling and wavetable synthesis to create what Klevgrand call a 'real audio synth'. In practice this works by taking an audio file and slicing it into small chunks, which are then mapped across various pitch zones. Each pitch on the keyboard has multiple layers, so the results are kind of like having an individual wavetable for each pitch zone.

Tomofon comes stocked with a healthy crop of pre-sliced audio files, but it's more fun to make use of your own samples. This is done using the easy-to-navigate editor window, where users can drag and drop audio files, which are analysed and mapped to pitch zones. Tomofon offers a good level of editing in order to fine tune the results. Zones can be remapped using a Kontakt-like layer editor, which is joined by controls to normalise, smooth and clean up the wavetables, plus a curve editor for adjusting how each pitch zone moves through its tables.

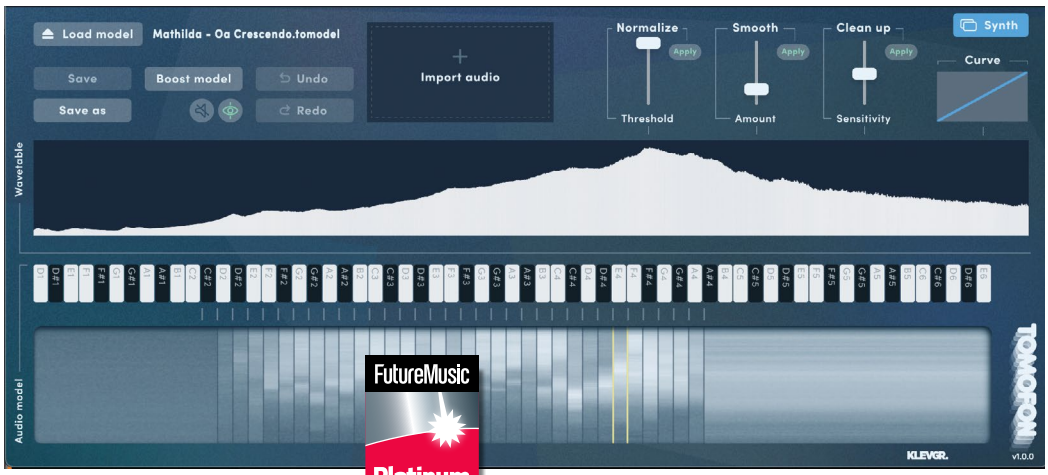
A prompt instructs users to avoid uploading polyphonic or percussive source material, although some of the most fun I've had has been with these kinds of 'wrong' material. Importing a distorted hi-hat loop, for example, created an icy and metallic, if – as I was warned – unpredictable synth sound. One very nice touch is that Tomofon lets users merge audio files, in order to blend elements of multiple imported samples, which can result in some wonderful cinematic textures.

The synth side of Tomofon is powerful too. The plugin has four polyphonic voices that can be pitched, modulated and panned independently. Each has ADSR envelopes for gain, depth (ie wavetable position), pitch and filter cutoff. The sustain stage of these envelopes is set to always loop, which can be used to create some interesting LFO-like effects.

Modulation of Tomofon's low-pass resonant ladder filter takes a little getting used to, as there's no strength/depth parameter for the envelope, which also works subtractively – ie, in the opposite direction to most synth filter envelopes. Once this has been understood though, it's flexible enough (although modes other than low-pass would be nice.)

There's also a mod matrix that allows users to route velocity, keymapping and two control inputs. The sound is finished off with reverb and delay modules and a master EQ. Depth and pitch also have LFOs to make use of, including sample & hold for randomisation.

While it looks deceptively slight, Tomofon contains a lot of sound design potential, which becomes clear even within the first few minutes of messing around with it. Those who want to put the extra time in with the editor can create some really expressive and lifelike instrument timbres, although there's also a lot of quick and easy fun to be had for those who just want to mess around with weird audio sources too – and they will often be rewarded with truly epic results for their efforts to boot. FM



FM VERDICT

9.0

Klevgrand's most substantial release to date is both powerful and fun. Great for experimental textures and cinematic sounds

THE PROS & CONS

+

Capable of realistic results as well as experimental fun

Multiple voices and modulation options

Easy-to-use editor for importing audio

–

Low-pass filter only

Filter modulation can be confusing

Noise Engineering Tymp Legio £205

Rob Redman takes a look at a percussive voice module that isn't afraid to put wackiness front and centre

CONTACT **WHO:** Noise Engineering **WEB:** noiseengineering.us **KEY FEATURES** Multi timbral percussion, CV controllable, Legio firmware options **DIMENSIONS:** 6hp

Percussive voice modules aren't hard to find, so why would a developer release another? Noise Engineering have answered that question with Tymp Legio, that offers some useful extra features on top of a versatile voice module.

The 6hp module is well built and graphically interesting while staying clearly labelled. The layout is simple, with three large knobs for pitch, decay and Wackitude (more on that later), a toggle switch for selecting the three modes and one for Tang, a sub mode selector. The bottom half is dedicated to a full set of CV ports. These allow patching of pitch, decay and wack, alongside a trigger input. Beneath them you'll find a stereo input and output pair. All good, although the stereo pairs are positioned top to bottom (and horizontal would make more sense).

So, what makes this module stand out? First is the sheer tonal variety on offer. The three modes are named onomatopeiacally, Boot, Cat and Boing and each covers a decent tonal range in itself. Having all three and the Tang options really delivers a vast array of possibilities. The Boot option can do every kind of kick you can think of, or patch in as volts per octave to produce some great bassline sounds. Cat is good for noisier sounds, like snares, and has as much range as Boot does, while Boing is good for crisper, more metallic sounds, ideal for cymbals.

Tones is further shaped by the wackitude control, that works a bit like a wavefolder and, in conjunction with the mode switches, allows a great deal of tonal refinement. The CV inputs make for some excellent modulation, really adding life to a patch, especially the Wack input.

The stereo inputs, labelled Quack, can be used as a simple mixer in Boing mode, or in Boot and Cat modes you can duck the audio, based on the position of the decay knob, a useful performance feature that saves space elsewhere in a rig and is not common on drum voices.

Lastly is the fact that Tymp Legio, as the names suggests, can have Legio firmwares installed, for free, over USB – potentially breathing new life into the device when the need arises. The stereo oscillator and dynamics processors are already available and Noise Engineering even provides printable overlays for the front panel. FM

FM VERDICT

9.0

Huge versatility, excellent build quality and tones to suit any need. The ability to install different firmwares is an excellent extra

THE PROS & CONS

+

Excellent range of tones on offer

Full CV control

Downloadable firmware options

–

Horizontal placement of the stereo pair would be better

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Universal Audio Volt 476P £390

Charlotte Sterland goes large, with the studio veterans' latest interface that's built to handle bigger performances

CONTACT **WHO:** Universal Audio **WEB:** uaudio.com **KEY FEATURES** Desktop 4-in/4-out USB audio interface with 24-bit/192 kHz audio conversion, 76 Compressor adds analogue circuitry based on the renowned 1176, 1-in/1-out MIDI connections, 48V phantom power, Dual studio-quality headphone amplifiers

The 476P is the largest interface in the Volt series, with more channels and closer control options. In a wooden and metallic case, this model is robust but still not heavy, at 1.6kg, it's designed for larger projects, like recording bands and groups acoustic instruments all via the same interface.

With analogue tube amp simulation and onboard compression, this model offers even more features than the smaller Volt series models. It is, again, inspired by the Apollo series (UA's set of larger, pricier interfaces), which has made the brand so revered, albeit without the onboard DSP.

Four pre-amps for 3-pin/TRS jack inputs each have their own volume controls and vintage tube amp sound options; so four acoustic instruments can be recorded at once. Via four output lines, audio can be taken separately into four speakers or channels of a mixer.

The 76 Compressor (inspired by UA's 1176 Limiting Amplifier) allows onboard moderation of the sound, creating a more even sound from the louds and quiets, with three preset options; vocals, guitars and 'fast attack' instruments such as drums. The amount of compression depends on the gain levels. (A higher gain level means the compressor will act more.) This takes away from the work required in the edit and ensures the input is of the highest quality, in line with much of UA's recording hardware. The vintage preamp is activated using the 'vintage' button under the compressor light.

Low latency stereo monitoring is highly useful, and mono playback can be activated with the mono key by the main monitor volume. Individual colour-coded lights and levels on the four input and output channels are easily visible from the other side of the room for checking levels on both signals coming in and out. Mono/stereo and input/output channels make it easy to see what's on and off. USB bus-powered (with the option of mains power), the 76P can be used anywhere with a laptop. MIDI in and out adds to the recording options. This also features the desk lock attachment point.

Both the Volt 4 and 476P come with lots of software included – a Marshall Plexi Classic Amp, Softube Time & Tone bundle, Ableton Live Lite, Melodyne Essential, Ampeg SVT-VR Classic, Ujam Virtual Drummer and Virtual Bassist, Spitfire Audio LABS, a 30-day trial of UAD Spark and Relab's LX480 Essentials – another bonus.

The 476P has much of the portability and compactness of a smaller interface but for four acoustic instruments. A solid sound and intuitive level monitoring and dials give this a great feel and, priced at £400, this is an excellent portable four-input interface. FM

Allows onboard moderation, creating a more even sound from the louds and quiets

FM VERDICT

8.5

A well-priced, convenient interface plus software bundle that's amply equipped for the business of recording bigger projects and group performances

THE PROS & CONS

+

Fully USB bus-powered

Monitor level lights for each channel

Four preamps

76 compressor settings: guitar, voice or fast

–

Could be even lighter

Impact Soundworks – Rosette Fingerstyle $179

We last featured an Impact Soundworks product in these pages when looking at one of their Shreddage range and, despite the name, the fretless bass in question wasn't only suitable for extreme shredding. It is in fact the underlying engine that gives the instruments their name, and Impact's Shreddage 3.5 engine is adaptable to all kinds of guitar. It therefore comes as no surprise to find that IS have turned their attention to the more polite end of the sonic spectrum in the form of Rosette Fingerstyle, which takes a steel-strung Taylor 141ce acoustic as its source. This has been recorded using Neumann KM184 and U87 mics alongside the guitar's built-in DI piezo pick-up signal. In terms of raw recordings, each string and fret was captured at five dynamic levels and with 10 round-robin versions to maximise potential realism. Articulations include strums, legato (hammer-on/pulls and slides), mutes, tremolo (and muted tremolo), chokes, harmonics and body taps. Besides the many tweaks possible to the raw material in the playback engine, there is a mixer section on the so-called Console page that adds a comprehensive effects sections to each of the three audio sources as well as the master output channel.

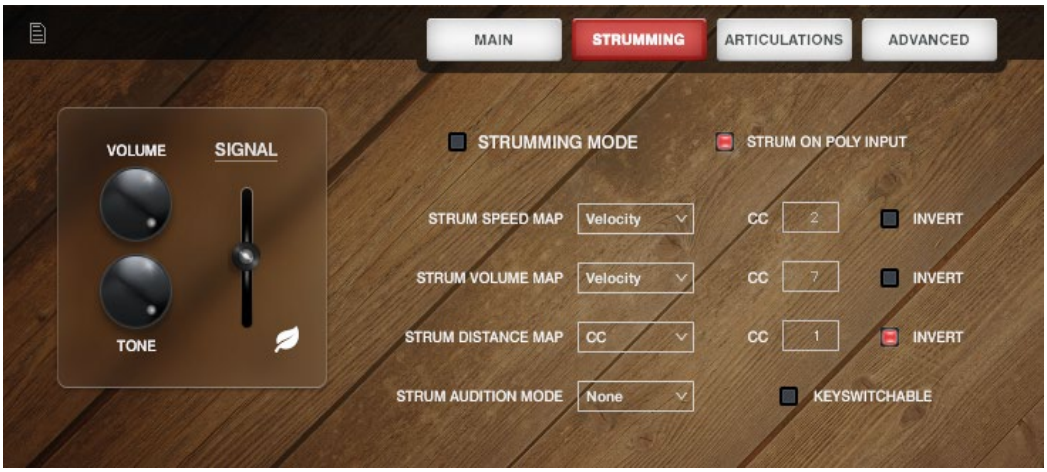
The Performance Style drop-down is the place to start when approaching the instrument for the first time, as what you select here will determine how the engine reacts to your playing – most notably, initially, in terms of hand position – which, in turn, will have an impact on the realism of the final result. For example, selecting mono legato modes adds slides and hammer-ons automatically.

Entering strumming mode does what you expect, though there are a range of different modes for triggering the strums. To really get to grips with these and other real-time playback options, it pays to read the manual or watch Impact's instrument walkthrough video online. In fact, and perhaps unsurprisingly, the key to getting a realistic performance with Rosette is understanding the interface and making use of the many features available. This however brings us to an important point: I can't help but the feel that the people who will get the most out of this instrument will be guitar players themselves – or at least those who have some knowledge of how a guitar is played. There are other libraries available (that also use Kontakt as their host) that make the job a lot easier for the non-guitarist by combining more advanced chord recognition and the ability to automatically strum/trigger notes in a range of preset patterns (or adapt/programme your own). Whilst this might be more limiting in some situations, it can allow the user to create realistic results very quickly. Certainly, Rosette Fingerstyle is more than capable of excellent results – and the Taylor has been nicely captured – but to make the most of this instrument a little more work is required by the user.

Bruce Aisher

impactsoundworks.com

VERDICT 7.8



Vital Vocals – Blues Rock Acapellas £24.95

Some seriously heavy vocal samples up for grabs inside this quality pack of blues-infused singing sessions.

Choose from lead work, backing tracks, off-the-cuff adlibs, and other lyrical layers, full of stank-faced grit and soul.

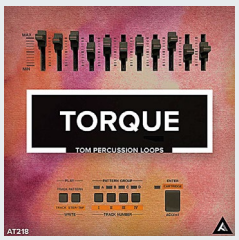
This 1.61GB set of royalty-free pipework is broken down into song kits, with all the acapellas captured in stunning quality. And each group or solo line is primed and ready to get chopped up, or slipped over your funkiest productions.

Really outstanding and powerful performances, throughout. Raw and authentic. With flashes of the Delta greats, up to the more modern growls of Jack White and the like.

They say you can't sing the blues until your second divorce. Dang. I just hope these guys can still see their kids. ***Roy Spencer***

loopmasters.com

VERDICT 9.0



Audiotent – Torque $26

For the latest edition to their wonderfully well-stocked sample library, Audiotent have whipped up a nifty set of tom drum grooves for y'all. The 107-strong selection has been carefully coaxed, captured and recorded, then run up the processing flagpole until each rhythmic loop is pumped and punchy. The emphasis here is on the low end, with all the tom lines on offer weighty and whomping. Packaged as an alternative to your bog-standard synth bottoms, this section will give a unique, playful take on your next track's deep bass business. From urgent and panicked to emotive, dusty and pulsing, each thumping, characterful loop has been designed to give your beats a boost. Real torque. *Roy Spencer*

audiotent.com

VERDICT 8.0

Vocal Roads – Apocalyptic Vocal Future Beats £24.95

With a title like that, you'd expect End Of Days wails. But this sugary-sweet selection of trappy pop acapellas couldn't be further from that, with the five lyrical construction kits here feeling like they're filled with cheery, radio-friendly bubble gum sing-songing, in which butter wouldn't melt.

However, give it a minute to clock the darker sub-text at play; all the zombies, murder, and the apocalyptic themes that run deep, making for an innocent looking, but sinister selection of vocals, perfect for soundtracking our long overdue Armageddon. *Roy Spencer*

loopmasters.com

VERDICT 7.0

Splice Originals – Sahara Malian Afrobeats From $7.99/mth

Give your Afrobeats a sonic shot in the arm, with this lovingly assembled selection of loops and one shots from the studio files of Senegalese producer, Iss 814 alongside Samba Traoré, a gifted guitarist from Mali.

The pair explore a whole host of past and present West African roots and rhythms, all of which are interwoven harmoniously with vitally modern takes on drum programming, dubby subs, and club-ready tops and synths, combining into a groovy, upbeat, poppy set of shapes and sounds to suit well-travelled tastes. *Roy Spencer*

splice.com

VERDICT 8.0

Sample Magic – Dreamy Indie & Lo-Fi From $7.99/mth

Wistful, warm and fuzzy feelings mix with woozy bass sounds, shiny guitar twangs and rose-tinted nostalgia, on this set of lo-fi indie rock loops. Drawing on the glory years of DIY labels and their long anonymous cassette tape heroes, this collection hits all the right notes for producers wanting to plump their sample crates with bedroom beats, lilting vocals, and sweet melodies.

Special shouts to the thick and forlorn tape-enriched pad sounds, breathy singing, and drum machine thumps, which round out the other choice offerings real nice. *Roy Spencer*

splice.com

VERDICT 7.0

Mastering the Mix Limiter

AI plugins have grown in popularity in recent years, with growing computing power putting smart plugins in the palms of the consumer. This is particularly true of plugins intended for mastering activities, where loudness and balance can take precedence over subjective qualities.

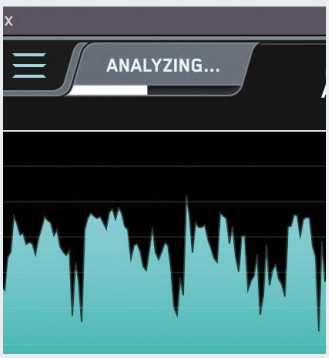
Limiter is just one of these smart mastering plugins, but with some other features that set this apart from other developers' AI offerings. In this short tutorial, we'll take a look at Mastering the Mix's Limiter plugin and see how it can help to achieve the desired loudness, without sacrificing clarity. You can buy the plugin or download the demo from Mastering the Mix's website.

Presets >

First, let's tell Limiter how loud we're going to want our master. To do this, click on the icon with three horizontal lines in the preset bar, which opens a dropdown menu of the available presets. You'll notice that some of the presets are named after a general use case or environment, such as Dynamic, Loud or Club. Other presets are named after specific formats or streaming platforms, such as Vinyl, Apple Music or YouTube. Each of these presets has a different target range on the Dynamic Range, LUFS and dBTP meters. Select a preset to get started.

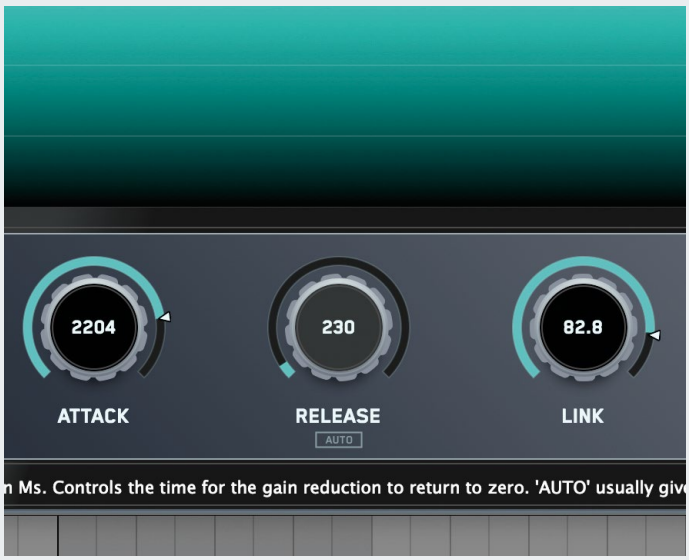
Analyze >

Once you've selected a preset, play your track during the loudest section then hit Analyze on the right. Limiter will listen to your track's loudness, dynamics and transients, then make suggestions for how to set your Gain, Attack, Link and Ceiling parameters according to the preset you've selected. It does not suggest NRG and PCH settings, as these are more subjective to personal taste. Mastering the Mix recommend leaving the Release setting on Auto for more musical processing.



Adjust >

The white part of the Gain level is where it recommends we bring the fader to, and the white arrows on Attack, Link and Ceiling signify how Limiter's smart analysis suggests we apply those settings. After adjusting Limiter's settings to match the smart engine's suggestions, your levels should be within the recommended Dynamic Range, LUFS and dBTP ranges for your preset. To listen to the effect Limiter is having on the signal, bypass the plugin with the right button under Ceiling.



< Release

Mastering the Mix suggest using Limiter's auto-release function, which is set to on as default. If we want to set the release ourselves, though, we can toggle the Auto button underneath the release dial to turn the control on. Both the Attack and Release times values are in milliseconds, so you can adjust your settings to the exact values you want. As with all of Limiter's controls, you can double-click on a parameter to enter a specific value, or hover your cursor over a parameter to find out what it is and how to use it.

LIMITING FOR EVERY SCENARIO

While mastering has historically been seen as a perplexing task, the various loudness standards that are now required by each music streaming platform or marketplace have only added confusion to the process. To tackle this, Limiter comes with a selection of loudness standards, or 'Presets' designed to aid you in getting your track to the correct loudness level for every popular music platform.

Limiter also lets you emphasise transients using the PCH slider, dial in some rich harmonic distortion with the NRG slider, and audition exactly what the plugin is doing using the Delta Mode button. This plugin can do much more than just limiting, then.

< Delta Monitoring

If you want to set your own Release value, it helps to listen to exactly what Limiter is doing to your signal while you adjust the release length. To do this, turn on the Delta monitoring function by toggling the left-hand button under Ceiling. Now we can listen only to what Limiter is removing. Not only is this helpful for dialling in your limiter settings, it also highlights to you if there's an element in your mix that is considerably louder than other elements, thus engaging your limiter too early.

Energy and punch >

Mastering the Mix Limiter has two more sliders on the left of the Gain fader that allow you to add even more processing to your audio signal. Increasing the NRG fader adds harmonic distortion, perfect for adding colour and grit to your master, as well as increasing the level. The PCH fader musically enhances the transient information of your signal, adding punch and impact to it using its intelligent transient detection algorithm. Because these features are pre-gain, you will need to re-analyse your signal after applying NRG or PCH to get a new target gain level.

< A/B Comparison

When limiting during mastering, generally the goal is to apply as transparent processing as possible, while getting the track to the correct volume level. Although Limiter makes suggestions as to how to set up your limiter, you may want to manually adjust some of them depending on the scenario. The A/B function lets you compare two states of the plugin and how it affects your master. In this case, we're comparing the suggested Limiter settings with added NRG and Punch on page A, with a faster attack time without NRG or PCH on page B. FM

Roland MC-707 £879

Roland's flagship groovebox was already impressive – **Leo Maymind** dives in to see how well it's held up

CONTACT **WHO:** Roland **WEB:** roland.com **KEY FEATURES** ZEN Core sound generator **MAX POLYPHONY:** 128 voices (ZEN core), eight (Looper) **SEQUENCER:** 128 steps **EFFECTS:** **Track Multi-Effects:** 90 types – Track EQ, **Chorus/Delay:** 9 types, **Reverb:** 7 types, **Master Effects:** 90 types, Master Compressor, Master EQ

Roland's MC-707 Groovebox impressed us right off the bat when it arrived in 2019 and it's not hard to see why. The 707 was Roland's biggest statement since it announced the TR-8 a few years prior when kicking off the ARIA range, and while the TR-8 may have been a bit easier to grok right off the bat, we suspect that the MC-707 is going to be a long-loved classic found in studios for many years to come.

Why? Well, looking at the specs alone, it's easy to see the appeal – eight tracks of synth, drums, or loops; a bevy of effects per channel and on the master; full USB audio out per channel and of the master; a customisable scatter effect; chord and scale mode to use the built-in synth voices with the pads; and here comes the kicker: 128 voices of polyphony.

The MC-707 truly lives up to its 'groovebox' name, as it features eight full polyphonic tracks, each of which can be a drum track, a synth track, or a looper track (there's also a second type of drum track that allows users to bus instruments into five compression buses). Both the drum and synth tracks use Roland's ZEN-Core engine and to put it bluntly, it sounds great. If you aren't a fan of the preset drum sounds, you can create your own kits with bespoke samples uploadable via SD card (or directly via USB when in Storage mode).

The good, the bad, the indifferent

User samples can also be loaded as oscillator waveforms in the synth engine, essentially making it possible to play samples using the full ZEN-Core engine. This is quite powerful stuff given that the MC-707's synths each feature four layers, known as partials in Roland speak. It's possible to edit each

REGULAR UPDATES? YOU CAN COUNT ON IT

The MC-707's OS has been updated regularly, with some big additions along the way: an undo/redo function; the ability to slice samples (a hotly user-requested feature); the ability to save/export clips separately from projects; a count-in and arpeggiator (surprisingly not included in the original release) and more. You'd almost say the current iteration is really a 'mk2' after all of that. One cool upgrade has been the random patch generator, which creates unpredictable results, nulling the need for endless preset scrolling.

individually or all of them at once, and there's enough parameters to keep you busy for a lifetime.

Each of the eight tracks feature a built-in multi-effect, of which there are 90 options. Roland has truly included everything but the kitchen sink here, as many of the effects are actually multi-effects nestled within a broader effect category, such as the new JD Multi effect that was recently added. The master output has another instance of this multi-effect, as well as a built-in compressor, EQ, and delay and reverb send.

Furthermore, each track can have 16 clips of up to 64 steps in length and each clip can store its own preset sound, essentially making the MC-707 function like an 8 x 16 mini Ableton session. The large rows of 8 x 2 pads and the eight faders dominate the physical layout, making the MC-707 a very, very hands on machine to jam with.

So how has it held up over the years? First of all, we're pleased to say that much like our recently reviewed Elektron Digitakt, the build quality of the MC-707 has proven up to the task of being hauled about from studio sessions to shows and everything in between. There are a plethora of knobs and faders to be bent out of shape if you're not careful, so using a Decksaver or dedicated case is definitely recommended if you plan on traveling with the MC-707. We're thankful that Roland has chosen to use full-size TRS jacks for all of the ins and outs, as well as full size DIN jacks for the MIDI connections, as none of them seem the worse for wear after heavy use.

> We suspect that the MC-707 is going to be a long-loved classic

The hopeful

What would we like to see changed? There are some things about the workflow that feel convoluted still, for example the way that scale mode works on the clip, track and project level. The number of effects to scroll through is at times fairly exhausting, and overall, sometimes, the sheer mass of sonic choices on the MC-707 can be overwhelming. And accessing the Recorder via the Project menu is a bit awkward as well, although all of these complaints are admittedly relatively minor in the grand scheme of things. FM

FM VERDICT

VALUE

BUILD

LONGEVITY

USEFULNESS

OVERALL

9.1

We were a fan of Roland's MC-707 from the start and it's only gotten better and more refined since

THE PROS & CONS

+

All of the classic Roland sounds, both TR and synth, in a single groovebox

Enough faders and knobs to make the MC-707 a more than capable live machine

Plenty of inputs and outputs, both on the audio and MIDI side

Full audio over USB makes the MC-707 feel modern

OS updates since its release have kept it feeling fresh

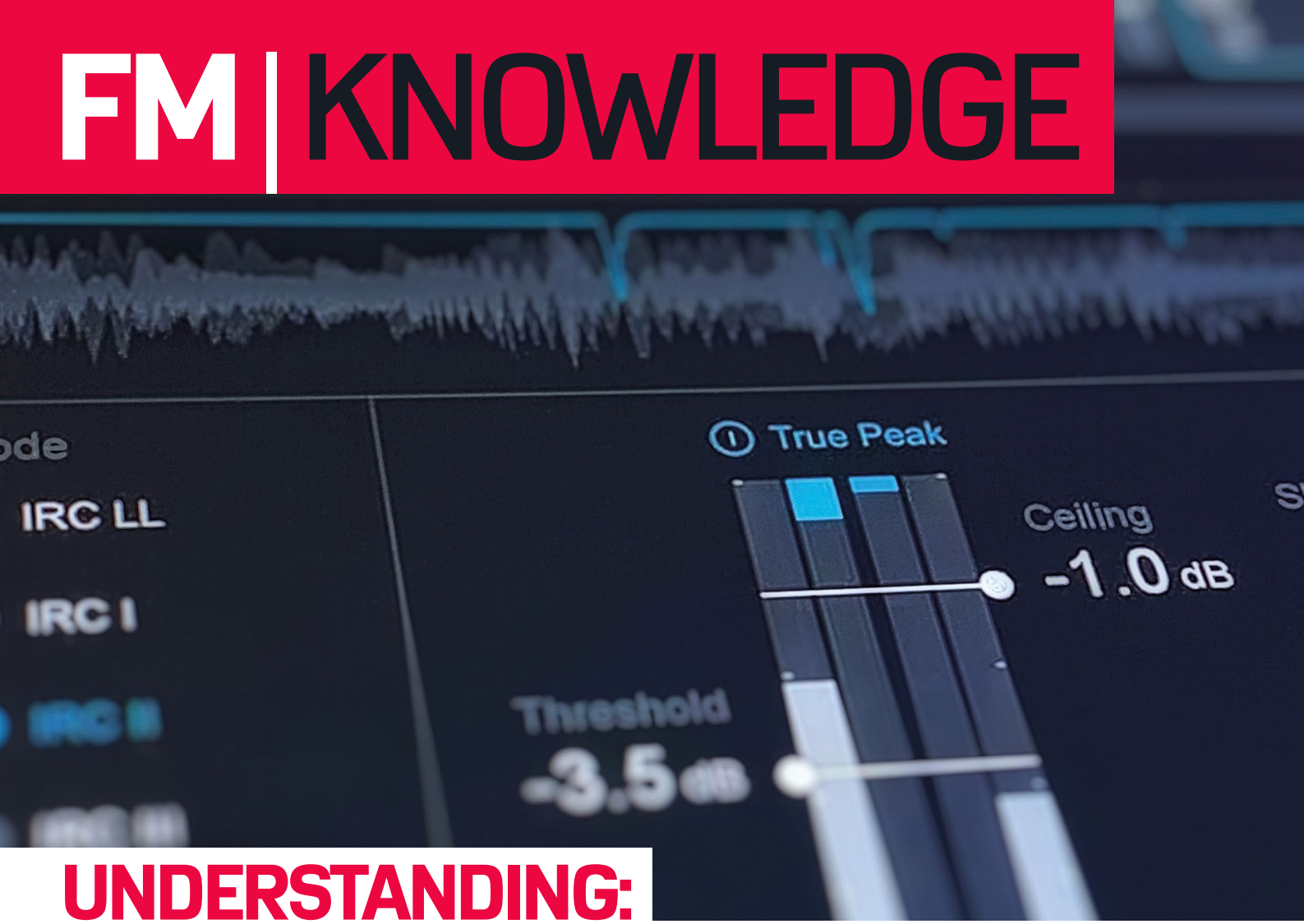
–

Still feels a bit clunky workflow-wise compared to some of its competitors

Not super portable

Awkward Shift button placement

Deep ZEN-Core sound design is still a bit of a chore



UNDERSTANDING:

Limiters

WHAT ARE THEY?

Compressors even out a signal's dynamic range or shape its dynamic response, but can't always act quickly enough to catch the fastest peaks. A limiter is a compressor that reduces the fastest peaks via a very fast attack, release and a ratio of 10:1 or higher. Designs vary depending on attenuation: analogue-style 'limiting amplifiers' are simply heavy-handed compressors, and add flavour; a digital 'brickwall' limiter, a transparent design with infinite ratio, gets its name from its output ceiling that acts as an absolute barrier.

To engage a limiter's gain reduction, there is usually a dedicated input gain control: increasing this turns up the signal, pushing it harder into the limiter. The output ceiling is a set dB value past which no audio can go: the highest peaks of a signal are reduced at this barrier.

Raising a limiter's input gain will cause an obvious increase in level, and this louder signal will sound perceptively better in comparison to the unprocessed signal. You may be fooled into thinking the limited version is more impressive, despite actually reducing transient detail in a negative way.

To maintain a balance of equal loudness, most limiters let you turn up the input gain and reduce output gain by the same dB amount at the same time. This keeps the signal at the same level while limiting is applied, pulling down the peaks without any 'impressive' gain increase. It's then easy to bypass the limiter and judge the peak reduction at equal level.

Six advanced limiting techniques

BACKGROUND WASH

1 Limiting is traditionally used to gently, transparently tame a signal's peaks, but can be used creatively. Using extreme gain reduction can turn a drum beat into a washy background ride layer, letting it sit behind the groove's upfront hits.

PUMPING LIMITER

2 A quick release time can give unwanted pumping and/or distortion but an extreme setting applied to a percussion loop – eg -24dB of gain reduction and 1ms release – can create a more desirable rhythmic pumping effect.

MULTIBAND

3 As with most dynamic processes, limiting can be applied to frequency areas in isolation. Multiband plugins like iZotope's Ozone suite make this easy.

PARALLEL LIMITING

4 Parallel compression blends a squashed signal alongside the unprocessed version. Similarly, an analogue-style limiter on a send can add harmonic character/ weight without destroying dynamics.

MID/SIDE

5 Imagine a complex, dense sound or mix containing loud peaks in the mid signal: regular full-band limiting will also pull down the side information, ruining the stereo balance. Instead, try M/S limiting, which lets you limit mono/stereo information individually.

CHAIN REACTION

6 Standard advice is to place a limiter at the end of the plugin chain. But don't be afraid to break this rule; for example, to tame a signal's sharp peaks to reduce load on a compressor.

Quick synth tips: Part 2

Get more out of your synths with our series of quick-and-dirty synthesis tips

QUICK SYNTH STRINGS

You can make vast-sounding synth strings by using saw waves, your synth's unison control, and a splash of spacious reverb. Unison, which stacks copies of the oscillator to create a bigger sound, should be turned up above two voices on each of the oscillators you're using, with the voices distributed across the stereo field using the spread, pan and detune controls, or whatever the equivalent is on your synth. EQ the low end out if needed, and you've got quick synth strings.

UNISON VS BASS

Unison detune can create gnarly bass noises, but you could find that there's noticeable variation in the level of the lowest harmonics, leaving the sub bass uneven – most undesirable for modern dance productions. Solve this by using high-pass filtering to kill the low end of your sound, then add another track playing the same notes using a super-solid sine wave sub bass to supply the missing low end.

ONBOARD EFFECTS

Many synths have effects built in, and they're often overlooked. Particularly for those working with in-the-box, it's likely your dedicated effect plugins will offer a far higher level of flexibility and control than any effects built into your synths. There are plenty of good reasons not to overlook synth effects though. For one thing, they're often tailored to sound particularly good with the instrument they're paired with. What's more, many built-in effects can be modulated or controlled directly from the synth itself. Take Arturia's new MiniFreak as an example, which lets users route the onboard LFOs and envelopes to effect parameters, in order to get the sound moving as part of the patch itself.

ADD SOME NOISE

The white noise oscillator is also easily forgotten, but it's a very important synthesis tool. For synth chords, layering white noise with the lows/mids cut and the top end boosted can add frequency-filling grit. It's also common to layer noise with a snappy envelope on snares. Finally, don't overlook noise as a powerful modulation source.

WANT MORE TIPS?

Come back for more next issue, and watch our playlist of 20 video tips – in a handy phone-friendly format – at: **bit.ly/fm20stip**

ANALOGUE BEATMAKERS

Elektron Syntakt

£849

Full Review: FM392 | Building on the successes of multiple other Elektron instruments, Syntakt is a top quality groovebox with a lot of power under the hood.

Korg Drumlogue £529

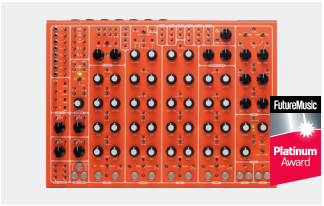
Full Review: FM392 A flexible, powerful drum machine that has a lot to offer for the price… and it's only slightly held back by a few clunky design choices!

Arturia DrumBrute Impact £249

Full Review: FM335 It's not the most versatile drum machine on the market, but the Impact combines quality sounds with a killer sequencer, at a price that makes it very tempting.

Behringer RD-9 £270

Behringer's 'tribute' does a convincing job of feeling and sounding like a genuine 909, all at a price below £300. It's hard to knock that.



SOMA Labs Pulsar-23 £1,759

Review: FM370 Pulsar-23 is odd, eccentric and unlike any other drum machine, but it's also one of the most powerful, creative and inspiring instruments on the market right now.

DIGITAL POLYSYNTHS

Arturia MiniFreak

€599

Full Review: FM391 | Although less of a trailblazer than the original MicroFreak, this is a stellar, versatile-sounding hybrid synth that's a joy to get hands-on with..

ASM Hydrasynth Deluxe £1,489

Review FM383 The Deluxe is a great-sounding, flexible polysynth, ideal as a performance-led keyboard that can successfully reach a wide range tones and textures.

Korg Wavestate £699

Review FM353 Wavestate walks the line perfectly between paying tribute to a '90s classic and offering cutting-edge tools. A fantastic update to a much-loved synth line.

Waldorf Quantum £3,500

Review: FM336 A stunning piece of hybrid synth design – setting a new benchmark for features, interface and sonics. It's expensive, but a synth that you'll find inspiring for many years.

Korg Opsix £699

Review: FM365 Opsix is packed with unique character, and – rarely for an FM instrument – it's fun and accessible. Another top-class digital synth from Korg.

MIDI KEYBOARDS

Novation Launchkey 88 Mk3 £200

Full Review: FM386

Launchkey 88 is a solid performer that makes a great standalone controller but is best coupled with one of the script-supported DAWs.

Arturia MiniLab 3 €99

Full Review: FM392

A great value keyboard with an updated feature set that makes this one of the best mini controllers around.

Akai MPK mini mk3 £90

Review FM363 A very decent upgrade with genuinely pro features, fixing its position in the top rung of mini keyboard controllers available.

NI Komplete Kontrol A-Series | from £119

Review FM338 A quality controller combined with a well-rounded software bundle.

Novation FLkey 37 £200

Review: FM383 There may be little by way of competition when it comes to FL Studio controllers, but this is a genuinely slick keyboard.

Novation Launchkey Mini Mk3 £110

Review: FM349 Small but well spec'd, this is a convenient and well-made controller that's great with or without Ableton Live.

Novation SL MkIII £540

Review: FM338 Well-designed and versatile. For those who work with both hardware and software, this may be the best studio centrepiece that's on the market.

NI Komplete Kontrol S-Series Mk2 £499

Review: FM324 Komplete Kontrol MkII brings a whole sonic universe under your fingertips like never before, with deeper DAW integration too.

NI Komplete Kontrol M32 £99

The M32 controller takes Native Instruments' Komplete Kontrol concept and places it into a properly portable, entry-level package with impressive results.

Arturia KeyStep Pro £339

Review: FM359 For melodic sequencing duties and flexible hardware control, this is one of the best keyboard devices around.

STUDIO HEADPHONES

Austrian Audio Hi-X15

£89

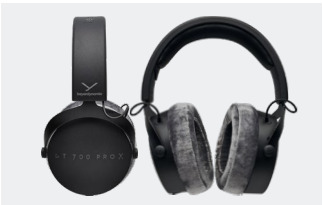
Full Review: FM386 | Superb cans for those tracking and mixing on a budget. Their compact size and light weight will also appeal to pros on the move.

Røde NTH-100 £149

Full Review: FM384 The NTH-100s are the best over-ear headphones we've tried for their price bracket. Go-to cans for all listening scenarios.

Focal Listen Professional £219

Full Review: FM342 Honest, transparent circumaural phones that cause little fatigue over long periods. A favourite choice in the all-rounder headphone category.



Beyerdynamic DT 700 PRO X £219 **Full Review: FM380** A reliable pair of headphones that combine great build quality with excellent sound.

Sennheiser HD-206 £20

Deceptively rugged all-rounders delivering much bang for buck, these represent a brilliant solution for budget-conscious studio scenarios.

DJ MIXERS

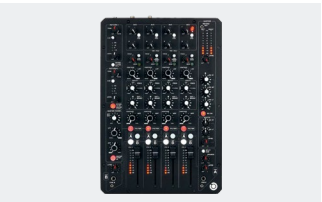
Pioneer DJ DJM-V10

£2,899

A favourite of many pro DJs including the likes of Carl Cox. This is a truly top-end, performance-centric device stuffed with features and flexibility.

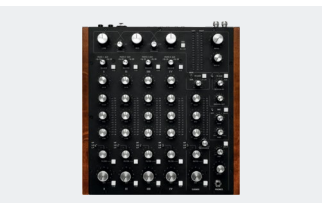
Allen & Heath Xone:96 £1,429

A worthy follow-on from A&H's much-loved Xone:92, the 96 is a rugged and flexible performance mixer with plenty of flexibility for modern hybrid setups.



Playdifferently Model 14 £1,950

Designed by Richie Hawtin, the Model 1 kicked off the boom in high-end performance mixers. This update strips it back to four channels for a more compact and affordable take.



Rane MP2015 £2,339

Rotary mixers aren't for everyone, but there's a lot to like about Rane's current crop, which blend retro cool with some useful modern features such as a USB interface.

Pioneer DJ DJM-900NXS 2 £1,659

Pioneer's Nexus range is as close as you get to an industry standard for club DJs, and this flagship mixer show us why.

OSC 2
LORENZ 02
GAIN
SAW
SQ
F-SHIFT
S-SHIFT
SYNC
FADE
DAWESOME
ARP
OSC1
OSC2
RATE
SYNC
120
2 Hz
KULT
FADE
FIL
FX
MOD
PROCESSING ...
TIMBRE
ENV
SYN
FX
MOD
SAME DUR
FREE
GAIN
PAN
PAN JIT
NOVUM
DAWESOME
DAWESOME
ABYSS
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